10822938
File 5:Biosis Previews(R) 1926-2008/Jan W2
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Set Items Description
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Set	Items	Description
S1	86	COLLAGEN AND FERMENT?
S2	43	S1 AND (BACTERIA OR MICROORGANISM)
S3	1	S1 AND BACILLUS
S4	10	S1 AND YEAST
S5	12	HIDE? AND FERMENTATION
S6	126	COLLAGEN AND BACILLUS
S7	1	S6 AND FERMENT?
S8	20	S6 AND CULTURE
S9	20	COLLAGEN AND CULTURE AND BACILLUS
S10	0	S9 NOT S8
S11	126	COLLAGEN AND BACILLUS
S12	1	S11 AND PEPSIN

? t s1/7/70-86

1/7/70
DIALOG(R)File 5:Biosis Previews(R)

08200462 BIOSIS NO.: 198682046849
THE SUPPRESSIVE EFFECT OF PYRROLE-2-CARBOXYLIC-ACID ON PLATELET AGGREGATION
AUTHOR: KOMIYAMA K (Reprint); TRONQUET C; HIROKAWA Y; FUNAYAMA S; SATOH O; UMEZAWA I; OISHI S
AUTHOR ADDRESS: KITASATO INST
JOURNAL: Japanese Journal of Antibiotics 39 (3): p746-750 1986
ISSN: 0368-2781
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: JAPANESE

ABSTRACT: In the course of a search for novel antibiotics, an antiplatelet substance was isolated from the %%%fermentation%%% broth of Streptomyces sp. No. 82-85. Thereafter, the active substance was identified as pyrrole-2-carboxylic acid (P2C) by structural studies. The effects of P2C on adenosine diphosphate (ADP)-, arachidonic acid-, %%%collagen%%%- or tumor cell-induced platelet aggregation were examined in vitro and ex vivo. In in vitro studies, P2C (25 .apprx. 100 .mu.g/ml) suppressed the aggregation of platelets of normal Wistar rats. The intraperitoneal administration of P2C (200 mg/kg) to rats and rabbits suppressed platelet aggregation induced by ADP, arachidonic acid and %%%collagen%%% when examined for 0.5 .apprx. 3 hours after administration. The agent also suppressed platelet aggregation induced by both mouse syngenic tumors, Meth-A fibrosarcoma and IMC carcinoma in vitro.

1/7/71
DIALOG(R)File 5:Biosis Previews(R)

08187055 BIOSIS NO.: 198682033442
FR-900452 A SPECIFIC ANTAGONIST OF PLATELET ACTIVATING FACTOR PRODUCED BY

STREPTOMYCES-PHAEOFACIENS I. TAXONOMY %%%FERMENTATION%%% ISOLATION AND PHYSICOCHEMICAL AND BIOLOGICAL CHARACTERISTIC
AUTHOR: OKAMOTO M (Reprint); YOSHIDA K; NISHIKAWA M; ANDO T; IWAMI M; KOHSAKA M; AOKI H
AUTHOR ADDRESS: EXPLORATORY RESEARCH LAB, FUJISAWA PHARMACEUTICAL CO LTD, 5-2-3 TOKODAI, TOYOSATO-CHO, TSUKUBA-GUN, IBARAKI 300-26, JAPAN**JAPAN
JOURNAL: Journal of Antibiotics (Tokyo) 39 (2): p198-204 1986
ISSN: 0021-8820
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

ABSTRACT: A PAF antagonist, designated as FR-900452, was isolated from %%%fermentation%%% products of Streptomyces phaeofaciens and the molecular formula was determined as C22H25N3O3S. The compound inhibited PAF-induced rabbit platelet aggregation with an IC50 of 3.7 .times. 10-7 M, but was much less active against %%%collagen%%%-, arachidonic acid- or ADP-induced aggregation (IC50; 6.4 .times. 10-5, > 10-4 or > 10-4 M, respectively).

1/7/72
DIALOG(R)File 5:Biosis Previews(R)

08178536 BIOSIS NO.: 198682024923
EFFECT OF HEMIN ON THE PHYSIOLOGY AND VIRULENCE OF BACTEROIDES-GINGIVALIS W-50
AUTHOR: MCKEE A S (Reprint); MCDERMID A S; BASKERVILLE A; DOWSETT A B; ELLWOOD D C; MARSH P D
AUTHOR ADDRESS: BACTERIAL METABOLISM RESEARCH LABORATORY, PUBLIC HEALTH LABORATORY SERVICE CENTRE FOR APPLIED MICROBIOLOGY AND RESEARCH, PORTON DOWN, SALISBURY SP4 0JG, ENGLAND, UK**UK
JOURNAL: Infection and Immunity 52 (2): p349-355 1986
ISSN: 0019-9567
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

ABSTRACT: Bacteroides gingivalis W50 was grown in a chemostat under steady-state conditions at pH 7.5 .+-. 0.2 and a constant growth rate of 6.9 h for periods of up to 6 weeks (146 bacterial generations) in a complex medium. Hemin was capable of limiting the growth of cells up to a concentration of approximately 0.5 .mu.g/ml since higher concentrations of hemin did not increase cell yields; cells grew in the absence of exogenously added vitamin K1. Only a limited number of amino acids was metabolized during growth, but because none of these was totally depleted, the limiting nutrient under hemin excess conditions was probably a peptide. A range of %%%fermentation%%% products was produced under all conditions of growth; higher concentrations of cytotoxic metabolites such as propionate and butyrate were formed under hemin excess conditions, although more ammonia was released under hemin limitation. When viewed by electron microscopy, cells grown under hemin limitation appeared to be either coccobacillary or short rods and possessed few fimbriae per cell, but large numbers of extracellular vesicles could be seen both surrounding the cell surface and free in the environment. In contrast, cells grown under hemin excess conditions were

more commonly coccus shaped and were more heavily fimbriated but had fewer extracellular vesicles. Marked differences were found in the susceptibility of mice to infection with cells grown under different concentrations of hemin. Cells transferred to media without any added hemin were avirulent, whereas those grown under conditions of hemin limitation (0.33 and 0.40 .mu.g/ml) produced a 20 and 50% mortality in mice, respectively. In contrast cells grown under hemin excess always caused 100% mortality in mice, although this virulence was dose dependent. When virulent, the bacteria caused an extensive, spreading infection with necrosis of the skin and subcutaneous tissues. %%%Collagen%%% disintegration was seen histologically, implying a role for collagenase production in the pathogenicity of these bacteria.

1/7/73
DIALOG(R)File 5:Biosis Previews(R)

08062321 BIOSIS NO.: 198681026212
DIGESTIBILITY OF COLLAGENOUS %%%FERMENTED%%% SAUSAGE IN MAN
AUTHOR: REUTERSWARD A L (Reprint); ANDERSSON H; ASP N G
AUTHOR ADDRESS: SWEDISH MEAT RES INST, POB 504, S-244 00 KAVLINGE, SWEDEN** SWEDEN
JOURNAL: Meat Science 14 (2): p105-122 1985
ISSN: 0309-1740
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

ABSTRACT: The digestibility of the protein of a %%%fermented%%% collagenous sausage was studied in three patients with ileostomies with small bowel resections. The patients were given four ordinary meals each day with a total protein content of about 64 g, half of which was derived from %%%collagen%%%. Pigskins from 6-month old scalded pigs were used as the %%%collagen%%% source. A %%%fermented%%% sausage, based on meat, was used as a reference and the patients with ileostomies served as their own controls. Urine was collected from two patients. The true nitrogen digestibilities were found to be 71-79% for the collagenous diets and 69-85% for the reference diets. Hydroxyproline digestibilities (apparent and true) for the collagenous diet periods were similar: 70-82%. This indicated that %%%collagen%%% was digested to the same extent as other proteins. Amino acid patterns of ileal excreta distinctly differed for each of the two periods, further confirming that all the protein was not absorbed. Elevated excretion of hydroxyproline in the urine after ingestion of the collagenous sausage was found, mainly as peptide bound hydroxyproline, but accounted for about only 2% of the ingested hydroxyproline. It was concluded that collagenous %%%fermented%%% sausage is a digestible as a reference sausage based on meat even without prior heat treatment.

1/7/74
DIALOG(R)File 5:Biosis Previews(R)

07240708 BIOSIS NO.: 198477072619
ASSIGNMENT OF ACHROMOBACTER-IOPHAGUS STRAIN I.029 TO VIBRIO-ALGINOLYTICUS

CHEMOVAR IOPHAGUS
AUTHOR: EMOD I (Reprint); SOUBIGOU P; TONG N T; KEIL B; RICHARD C
AUTHOR ADDRESS: UNITE CHIM PROTEINES, INST PASTEUR, 75015 PARIS, FR**FRANCE
JOURNAL: International Journal of Systematic Bacteriology 33 (3): p451-459 1983
ISSN: 0020-7713
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

ABSTRACT: Strain CIP 82.01 of V. alginolyticus and strain I.029 (previously designated A. iophagus) were compared. Strain I.029 produces a collagenase of high specific activity (Achromobacter collagenase; EC 3.4.24.8). Collagenase production is induced in strain CIP 82.01 by %%%collagen%%% or macromolecular fragments of %%%collagen%%% in a manner similar to collagenase induction in strain I.029; caseinolytic proteinase is constitutive. Both strains also produce a constitutive extracellular endonuclease. Collagenases from both strains cleave either native %%%collagen%%% in its helical region or a simialar synthetic peptide; both enzymes are inhibited by EDTA, but not by diisopropyl fluorophosphate. The collagenase subunit (MW, 35,000) of strain CIP 82.01 is similar in amino acid composition to the subunit of the strain I.029 enzyme, although some of the aspartic and threonine residues in strain CIP 82.01 are replaced by glutamic and serine residues in strain I.029. Surface radioiodination followed by 2-dimensional electrophoresis showed that there are quantitative differences in the major outer membrane proteins of the 2 strains. Strains CIP 82.01 and I.029 differ qualitatively in resistance to ampicillin and carbenicllin, in cellobiose %%%fermentation%%%, in ornithine decarboxylase activity and in halophilism. Strain I.029, which was originally designated A. iophagus, should be included within the species V. alginolyticus, but this organism should be distinguished from other strains of this species by the designation V. alginolyticus chemovar iophagus, with the corresponding collagenase designated iophagus collagenase (EC 3.4.24.8).

1/7/75
DIALOG(R)File 5:Biosis Previews(R)

06317779 BIOSIS NO.: 198172051730
IMMOBILIZATION OF BREVIBACTERIUM-FLAVUM CELLS ON %%%COLLAGEN%%% FOR THE PRODUCTION OF GLUTAMIC-ACID IN A RE CYCLE REACTOR
AUTHOR: CONSTANTINIDES A (Reprint); BHATIA D; VIETH W R
AUTHOR ADDRESS: DEP CHEM, BIOCHEM ENGINEERING, RUTGERS UNIV, NEW BRUNSWICK, NEW JERSEY 08903, USA**USA
JOURNAL: Biotechnology and Bioengineering 23 (4): p899-916 1981
ISSN: 0006-3592
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

ABSTRACT: Live cells of B. flavum were immobilized for the production of glutamic acid. The reason for such a choice was that glutamic acid %%%fermentation%%% is an extensively studied %%%fermentation%%% and one which requires the viability of entire cellular faculties for the acid production. B. flavum was chosen because it is an industrially used

bacterium and is very potent for glutamic acid production. Studies were performed to fine aeration and agitation conditions for optimal growth and glutamic acid productivity. Experiments were done to find the optimum harvesting time. The cell activity peaks during the run of %%%fermentation%%% and the time at which the peak occurs were found. Conventional methods for immobilizing the cells on %%%collagen%%% were lacking. The pH and drying were the 2 main reasons for loss of viability of the cells; the latter being more important. A modified immobilization procedure was devised, which can immobilize live cells at any given pH and ionic strength, in contrast to the conventional method which requires the pH > 11 or < 3. This new method involves dialysis of %%%collagen%%% in suitable dialysis bags against water at pH 7 (or buffer at any desired pH). The dialyzed %%%collagen%%% blended at 20,000 rpm, resulted in a very smooth dispersion, unnoticeably different from %%%collagen%%% dispersion prepared at pH 11. The dispersed %%%collagen%%% was then cast and dried at an elevated temperature, and high air flow rate over the cast membrane, decreasing the time of drying from 6-8 h (in the conventional method) to 1.5-2 h. The membrane was tested for glutamic acid producing capabilities in a column reactor with the membrane spirally wound. The reactor was operated under continuous conditions for 5-10 days with stable activities.

04937317 BIOSIS NO.: 197662033456
EVALUATION OF MANNICH BASES AND RELATED COMPOUNDS AS INHIBITORS OF MITOCHONDRIAL FUNCTION IN YEAST AND INHIBITION OF BLOOD PLATELET AGGREGATION BLOOD CLOTTING AND IN-VITRO METABOLISM OF 5 DI METHYLAMINO-1-PHENYL-1-PENTEN-3-ONE HYDRO CHLORIDE
AUTHOR: DIMMOCK J R; HAMON N W; HINDMARSH K W; MILLS D G; NEGRAVE L E; RANK G H; ROBERTSON A J
JOURNAL: Journal of Pharmaceutical Sciences 65 (4): p482-488 1976
ISSN: 0022-3549
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: Unspecified

ABSTRACT: 5-Dimethylamino-1-phenyl-1-penten-3-one chloride (I.alpha.) and 32 analogs were tested for inhibition of respiratory-dependent growth in Saccharomyces cerevisiae. Of the 33 compounds tested, 13 appeared to affect mitochondrial function, since the inhibition of respiratory-dependent growth was statistically greater than the inhibition of growth on %%%fermentable%%% energy sources. Inhibition of mitochondrial function in yeast and growth inhibition of an in vitro culture of human epidermoid carcinoma (KB) were positively correlated since 83% of the compounds tested either had mitochondrial-inhibiting properties and significant activity in the KB test or were inactive in both tests. Similarly, 78% of compounds tested showed murine toxicity and mitochondrial inhibition or had no effect on murine toxicity and yeast mitochondrial function. Injection of I.alpha. into rats resulted in the appearance of blood in the urine and feces. Compound I.alpha. inhibited ADP and %%%collagen%%%-induced aggregation of rat platelets but had no effect on blood clotting. TLC, following incubation of I.alpha. with a rat liver extract, showed that the structure of I.alpha. was not

enzymatically modified and indicated activity per se on platelet aggregation and mitochondrial function.

1/7/77
DIALOG(R)File 5:Biosis Previews(R)

0001943180 BIOSIS NO.: 19684900101821
Activity of the proteolytic enzyme ficin in leaves of some fig varieties grown in the Uzbek SSR [Engl. sum.]
ORIGINAL LANGUAGE TITLE: Aktivnost' proteoliticheskogo %%%fermenta%%% fitsina v list'yakh nekotorykh sortov nizhira, proizrastayushchikh v Uzbekskoi SSR [Engl. sum.]
AUTHOR: SOLOV'EV V I; AKHMEDOV Yu A
AUTHOR ADDRESS: All-Union Res. Inst. Meat Ind., Moscow, USSR
JOURNAL: PRIKL BIOKHIM MIKROBIOL 3 ((6)): p699-703 1967 1967
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: Unspecified

ABSTRACT: The proteolytic and elastic properties of juice obtained from leaves of 5 fig varieties grown in Uzbekistan were studied. The enzyme activity changed in relation to the varieties. Thejuice of fig varieties Naples, Green and Violet showed the highest proteolytic activity and strongest effect on elastin and %%%collagen%%% (i.e. on proteins which primarily determine meat toughness). The substrates tested (myosin, elastin and %%%collagen%%%) underwent hydrolysis by the juice of different fig varieties at a different rate. This indicates the occurrence of various proteolytic fractions in the ficin enzymic complex of the juices tested, the fractions existing in different ratios. ABSTRACT AUTHORS: Authors

1/7/78
DIALOG(R)File 5:Biosis Previews(R)

0001723272 BIOSIS NO.: 19674800007276
Use of semi-biological prosthesis for vascular plasty [Engl. summ.]
ORIGINAL LANGUAGE TITLE: Ispol'zovanie polubiologicheskikh protezov dlya plastiki sosudov [Engl. summ.]
AUTHOR: KHIL'KIN A M; SHEKHTER A B; TERYAEV V G; LEMENEV V L; DRONOV A F; ISTRANOV L P; PLOTKIN L P
AUTHOR ADDRESS: I. M. Sechenov Ist Moscow Med. Inst., Moscow, USSR
JOURNAL: VESTNIK KHIR IM II GREKOVA 96 ((3)): p79-84 1966 1966
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: Unspecified

ABSTRACT: First in surgical practice the combined semibiological prosthesis with anticoagulant properties were used for the venous plasty. The synthetic frame was saturated by a fibrous %%%collagen%%% mass sedimented from the solution by heparin. In the experiments on 20 dogs (replacement of a segment of the inferior vena cava), thrombosis, stenosis or hemorrhage were not observed. The %%%collagen%%% [long dash]heparin complex was gradually lysed by macrophages, neutrophiles and proteolytic

blood %%%ferments%%%. Simultaneously, there was the process of proliferation of the large pores of the prosthesis by the connective tissue. To the third month the formation of the new vascular wall completely covered with endothelium was observed. Subsequently, the elastic fibers and partially smooth muscle cells were regenerated.
ABSTRACT AUTHORS: Authors

1/7/79
DIALOG(R)File 5:Biosis Previews(R)

0001682899 BIOSIS NO.: 19664700087001
Gistokhimiya nekotorykh %%%fermentov%%% energeti-cheskogo obmena v protsesse eksperimental'nogo obrazovaniya siliko-ticheskoi soedinitel'noi tkani Histochemical characteristics of some energy metabolism enzymes in the process of the experimental formation of silicotic connective tissue [rat] [Engl. summ.]
AUTHOR: SHNAIDMAN L M
AUTHOR ADDRESS: Inst. Exp. Clin. Oncol., Acad. Med. Sci. USSR, Moscow, USSR
JOURNAL: ARKHTV PATOL 27 ((11)): p34-40 1965 1965
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: Unspecified

ABSTRACT: There is a high activity of the redox enzymes in the connective tissue cells of the forming silicotic nodules at the early stages of silicosis development. The greatest activity was found. The diphosphopyridine nucleotide (DPN)-N-nitro-tetrazolium blue-reductase the nitrotetrazolium blue-reductase, [alpha]-glycerophosphate, of malic and lactic acids as well as of cytochromoxidase; there was a somewhat lower activity of the nitro-tetrazolium blue-reductase of isocitric and succinic acids; and the weakest of the nitro-tetrazolium blue-reductase of glucose-6-phosphate and triphosphopyridine nucleotide (TPN)-N-nitro-tetrazolium blue-reductase. With the development of silicotic nodules the activity of the redox enzymes in the silicotic connective tissue cells was progressively reduced with a complete disappearance of most of the nodules in 3/2[long dash]5 months. Development of pathological %%%collagen%%% fibers in silicosis is associated with the established peculiarities of cellular metabolism.
ABSTRACT AUTHORS: Author

1/7/80
DIALOG(R)File 5:Biosis Previews(R)

0001672050 BIOSIS NO.: 19664700076152
Histochemlcal study of oxidation-reduction enzymes in experimental Silicosos [Engl. summ.]
ORIGINAL LANGUAGE TITLE: Gistokhimicheskoe issledovanie okis-litel'no-vos stanovitel'nykh %%%fermentov%%% pri eksperimental'nom silikoze [Engl. summ.]
AUTHOR: RAIKHLIN N T; SHNAIDMAN I M
AUTHOR ADDRESS: Res. Inst. Ind. Hyg Occup. Dis., Karaganda, USSR
JOURNAL: BYUL EKSP BIOL MED 60 ((10)): p112-117 1965 1965
DOCUMENT TYPE: Article

RECORD TYPE: Abstract
LANGUAGE: Unspecified

ABSTRACT: In the process of experimental silicosis histochemical methods were used to study the activity of nicotinamide adenine dinucleo-tide and nicotinamide adenine dinucleotide phosphate associated dehydro-genases, diaphorases and cytochromoxydase. In addition, a study was made on the histochemical features of intercellular silicotic connective tissue. The enzymatic activity in the cells of silicotic nodules increases approximately until the 3rd wk., then begins to decline, particularly markedly after the 8th wk. since the beginning of dust pollution. The formation and maturation of silicotic connective tissue takes place under conditions of a changed activity of oxidation-reduction processes caused apparently by damage of mitochondriae in the connective-tissue cells. The discovered characters of enzymatic activity explain to a certain extent certain peculiarities of the silicotic connective tissue which consist in the formation of pathologically defective %%%collagen%%% fibers under the influence of silicon. ABSTRACT AUTHORS: Authors

1/7/81
DIALOG(R)File 5:Biosis Previews(R)

0001509672 BIOSIS NO.: 19654600023765
Histochemical study of proteins, mucopolysaccharides, certain enzymes, and deoxyribonucleic acids [DNA in skin wounds in alimentary and alimentary-chemical C-avitaminosis [English summ.]
ORIGINAL LANGUAGE TITLE: Gistokhimicheskoe izuchenie belkov, mukopolisakharidov, nekotorykh %%%fermentov%%% i dezoksiribonukleinovoi kisloty v ranakh kozhi pri alimentarnom i alimentarno-khimicheskom C-avitaminoze [English summ.]
AUTHOR: FUKS B B; VINOGRADOV V V; SHISHKIN GS; MAKSIMOVSKII L F
AUTHOR ADDRESS: Inst. Exp. Biol. Med., Siberian Br. Acad. Sci. USSR, Novosibirsk, USSR
JOURNAL: ARKH PATOL 26 ((1)): p39-47 1964 1964
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: Unspecified

ABSTRACT: Guinea pigs were kept on scorbutic diet and also received the preparation (a complex compound of Fe and tartaric acid), destroying ascorbic acid. Histochemical analysis of proteins, mucopolysaccharides, some enzymes and DNA was done in the wounds of these guinea pigs. The following changes occurred in the fibroblasts in C-avitaminosis: arrest of the synthesis of collastromine, procollagen and protoplasmatic proteins, sulfated mucopolysaccharides and DNA, a drop of the activity of esterases and proteases; capillaries do not regenerate in such wounds, fibrin bands appear between cells of the regenerate. There are formed fibrin-pro-%%%collagen%%% complexes in which reaction groups of the fibrin molecules are screened by procollagen and are not chemically detectable. The presence of fibrin may be proved in them by measuring the double refraction power. Introduction of ascorbic acid into the diet led to the restoration of the synthesis of proteins, mucopolysaccharides, enzymes and DNA (minimum by 20%) microspectrophotometric analysis, fibrin-procollagen complexes are destructed by macrophages. Disturbances of connective tissue cell properties and functions exhibit a considerable

difference as contrasted to mild disturbances of the epidermis growth and differentiation. ABSTRACT AUTHORS: Authors

1/7/82
DIALOG(R)File 5:Biosis Previews(R)

0001420525 BIOSIS NO.: 19644500041716
Collagenolytic activity in mammalian bone
AUTHOR: WOODS JOHN F; NICHOLS GEORGE
AUTHOR ADDRESS: Harvard Med. Sch., Boston, Mass., USA
JOURNAL: SCIENCE 142 ((3590)): p386-387 1963 1963
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: Unspecified

ABSTRACT: %%%Collagen%%% from bone was incubated with bone-cell homogenate. At the end of incubation the %%%collagen%%% had been partially broken down to ultrafiltrable units indicating that %%%ferments%%% with collagenolytic activity, which can be released by homogenization, exist in bone cells.[long dash]Authors.

1/7/83
DIALOG(R)File 5:Biosis Previews(R)

0001297202 BIOSIS NO.: 19634100019248
Biochemical characteristics of Bacteroides melaninogenicus. A study of thirty-one strains
AUTHOR: SAWYER SYLVIA J; MACDONALD J B; GIBBONS R J
AUTHOR ADDRESS: Harvard Sch. Publ. Health, Boston, Mass, USA
JOURNAL: ARCH ORAL BIOL 7 ((11/12)): p685-691 1962 1962
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: Unspecified

ABSTRACT: Thirty-one strains of Bacteroides melaninogenicus were studied. All strains were actively proteolytic attacking reconstituted neutral salt-extracted %%%collagen%%% and gelatin and producing H2S. Most strains produced indol. The strains all required or were stimulated by hemin. None reduced nitrates and none formed catalase. Colony form was usually smooth, but rough variants were found: all strains produced black colonies given an excess of hemin. Some strains were nonfermentative; some %%%fermented%%% only glucose, lactose and galactose; some %%%fermented%%% several carbohydrates other than lactose and galactose and hydrolyzed starch. Some strains have an absolute requirement for menadione or related naphthoquinones. ABSTRACT AUTHORS: Authors

1/7/84
DIALOG(R)File 5:Biosis Previews(R)

0000911009 BIOSIS NO.: 19573100038607
Investigations on fusiform bacteria

ORIGINAL LANGUAGE TITLE: Untersuchungen an Fusobacterien
AUTHOR: BERGER U
AUTHOR ADDRESS: U. Hamburg, 20
JOURNAL: ZENTRALBL BAKT ABT I ORIG 166-167-168 ((5)-(4)-(1)): p484-497, 372-384, 29-36 1956 1956
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: Unspecified

ABSTRACT: The uncertain taxonomic position and classification of the fusiform anaerobic bacteria and the divergences in the nomenclatures of Bergey, Topley and Wilson and Prevot are noted. It is stressed that flagellation and motility do not always coincide; there exist flagellated strains that are not motile and even motile non-flagellated strains. Also, motility, oxygen tolerance and serophility are not reliable species criteria. Twenty-seven fusiform strains, among them the proteolytic Fusobacterium nucleatum Knorr, F. plaut-vicenti Boe, and the "saccharolytic" F. girans, were studied for their biochemical and morphological properties. In the presence of air they exhibit some alpha hemolysis and a minimal amount of a dark pigment. Electron-microscopy demonstrates the presence or lack of flagella which, however, do not coincide with positive or negative motility. Controversial "spheric" bodies (probably related to L forms) are shown. Spirochete-like formations are considered as artifacts. No taxonomy presently used is considered adequate but the classification of Prevot is comparatively most satisfactory. Six strains of F. plaut-vincenti were tested for the presence of toxins and/or toxin-like %%%ferments%%%. None of them showed any trace of leuko-cydin, fibrinolysin, plasma- and %%%collagen%%% -coagulase. Hyalonuridase production could not be ruled out completely, but is improbable. Two of the 6 strains were [beta]-hemolytic on rabbit blood plates but none on human and sheep blood. Deep colonies did not produce hemolysis in either blood. A non-filtrable agent of all 6 strains lysed sheep and rabbit red blood cells in blood broth but not human erythrocytes. Non-specific immunity, the ability of body fluids to destroy F. plaut-vincenti (6 strains) was tested in vitro. In the presence of complement the organisms were phagocytized rapidly and completely. Fresh human serum killed the organisms within 4 hours. On the other hand lysozyme and lipase did not hurt the organisms. ABSTRACT AUTHORS: Ivan Saphra

1/7/85
DIALOG(R)File 5:Biosis Previews(R)

0000759529 BIOSIS NO.: 19532700016761
A study of %%%collagen%%%. 1. Concerning bacterial collagenases
ORIGINAL LANGUAGE TITLE: Etudes sur le collagene. 1. A propos des collagenases bacteriennes
AUTHOR: DeLAUNAY M; GUILLAUMIE M; DeLAUNAY A
JOURNAL: ANN INST PASTEUR [PARIS] 76 ((1)): p16-23 1949 1949
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: Unspecified

ABSTRACT: A simple method of detecting collagenase or %%%ferments%%% capable of destroying %%%collagen%%% was described. The authors stressed

the importance of collageneses in microbiology and pathology. ABSTRACT AUTHORS: C. R. Falk

1/7/86
DIALOG(R)File 5:Biosis Previews(R)

0000419537 BIOSIS NO.: 19411500016793
The carbohydrate in %%%collagen%%%
AUTHOR: BEEK JOHN
AUTHOR ADDRESS: Nation. Bur. Standards, Washington
JOURNAL: JOUR AMER CHEM SOC 63 ((5)): p1483 1941 1941
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: Unspecified

ABSTRACT: The sugars of hydrolyzed %%%collagen%%% are not %%%fermentable%%% with a galactose-active yeast. Added d-galactose is %%%fermented%%%; hence neither d-glucose nor d-galactose forms any considerable part of the carbohydrate in %%%collagen%%%, as previously reported. The sugars present may be l-glucose and l-galactose. ABSTRACT AUTHORS: E. E. Snell

? t s1/7/1

1/7/1
DIALOG(R)File 5:Biosis Previews(R)

0020007266 BIOSIS NO.: 200800054205
Effects of arachidonate-enriched triacylglycerol supplementation on serum fatty acids and platelet aggregation in healthy male subjects with a fish diet
AUTHOR: Kusumoto Aki (Reprint); Ishikura Yoshiyuki; Kawashima Hiroshi; Kiso Yoshinobu; Takai Shinji; Miyazaki Mizuo
AUTHOR ADDRESS: Suntory Ltd, Inst Hlth Care Sci, 1-1-1 Wakayamadai, Shimamoto, Osaka 6188503, Japan**Japan
AUTHOR E-MAIL ADDRESS: AkiKusumoto@.suntory.co.jp
JOURNAL: British Journal of Nutrition 98 (3): p626-635 SEP 2007 2007
ISSN: 0007-1145
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: The changes in fatty acid composition of serum and in platelet aggregation induced by supplementation of arachidonate-enriched TAG were investigated in twenty-four healthy Japanese men in a double-blind, placebo-controlled study. The arachidonate-enriched TAG ingested was an edible oil, extracted and purified from a biomass of submerged %%%fermented%%% Mortierella alpina. Mean daily intake of fish and shellfish by subjects was 87-2 (SE5.3) g/d, while dietary intakes of arachidonic acid (ARA) by the ARA group and placebo group were 175 (SE 12) and 179 (SE13) mg/d, respectively. In the ARA group, after 2-week supplementation of 838 mg ARA/d, ARA concentration in serum phospholipids was increased from 9.6 (SE0.4) to 13.7 (SE0.4) g/100g total fatty acids, and was significantly different from that in the placebo group (P<0-001).

This level was maintained for 4 weeks but returned to baseline level after a 4-week washout period. Linoleic acid concentration in serum phospholipids decreased from 19.2 (SE0.8) to 16.3 (SE0.6) g/100 g total fatty acids in the ARA group. Similarly, ARA content of serum TAG increased after ARA supplementation. Neither the EPA nor DHA content of serum phospholipids or TAG was altered by ARA supplementation. The platelet aggregation induced in platelet-rich plasma by adding adenosine diphosphate, %%%collagen%%% and ARA, physical characteristics of subjects, and biochemical parameters were unchanged throughout the test period. These findings suggest that ARA concentration in serum phospholipids and TAG can be safely increased by supplementation of arachidonate-enriched TAG oil.

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Set     Items   Description
S1         86   COLLAGEN AND FERMENT?
S2         43   S1 AND (BACTERIA OR MICROORGANISM)
S3          1   S1 AND BACILLUS
? s s1 and yeast
          86  S1
      157536  YEAST
      S4  10  S1 AND YEAST
? t s4/7/1-10

 4/7/1
DIALOG(R)File   5:Biosis Previews(R)
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0019925173 BIOSIS NO.: 200700584914

Paecilomyces fumosoroseus blastospore production using liquid culture in a bioreactor

AUTHOR: Lozano-Contreras Monica Guadalupe (Reprint); Elias-Santos Myriam; Rivas-Morales Catalina; Luna-Olvera Hugo Alberto; Galan-Wong Luis Jesus; Maldonado-Blanco Maria Guadalupe

AUTHOR ADDRESS: UANL, Fac Ciencias Biol, Inst Biotecnol, Av Pedro Alba and Manuel L Barragan,Ciudad Univ,AP, San Nicolas De Los Garza 66450, Nuevo Leon, Mexico**Mexico

AUTHOR E-MAIL ADDRESS: qbpmonik@terra.com.mx

JOURNAL: African Journal of Biotechnology 6 (18): p2095-2099 SEP 19 2007 2007

ISSN: 1684-5315

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: There are many advantages to using liquid cultures for the production of blastospores. These include mainly the processes of scale up which are relatively easy, as well as the control of parameters such as temperature, aeration and pH. In this work, we evaluated the production of Paecilomyces fumosoroseus blastospores using a low-cost liquid culture medium in a %%%fermenter%%% in comparison to a medium commonly used for this purpose, with regard to yield and viability of blastospores. The two media contained the same concentration of glucose but differed in N source (M1 containing casamino acids and M2 provided with %%%collagen%%% peptone and %%%yeast%%% extract). Starting with an inoculum of 1 x 10(6) blastospores/ml, M2 medium produced 2 x 10(10) blastospores/ml after incubation for 72 h at 520 rev/min agitation and 1

v/v/m (volume air/volume liquid.min) aeration, while only 2.4 x 10(8)/ml were produced with M1. In addition, the microorganisms in medium M1 grew more slowly during log phase and reached an earlier plateau at 36 h %%%fermentation%%%. The medium containing %%%collagen%%% peptone and %%%yeast%%% extract is an excellent alternative for the production of P. fumosoroseus blastospores, providing lower cost, higher yield and shorter propagation time, but formulation does need to be improved.

4/7/2
DIALOG(R)File 5:Biosis Previews(R)

0019536544 BIOSIS NO.: 200700196285
High level expression of human endostatin in Pichia pastoris using a synthetic gene construct
AUTHOR: Su Zhijian; Wu Xiaoping; Feng Ya; Ding Changcai; Xiao Yechen; Cai Lu; Feng Wenke; Li Xiaokun (Reprint)
AUTHOR ADDRESS: Jilin Agr Univ, Bioreactor Engn Res Ctr, Changchun 130118, Peoples R China**Peoples R China
AUTHOR E-MAIL ADDRESS: xiaokunli@163.net
JOURNAL: Applied Microbiology and Biotechnology 73 (6): p1355-1362 JAN 2007 2007
ISSN: 0175-7598
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Endostatin, a 20-kDa C-terminal fragment derived from type XVIII %%%collagen%%%, is a potent angiogenesis inhibitor and an antitumor factor. To improve the production of recombinant human endostatin on increasing demand in clinical practice, we constructed an artificial gene encoding its mature peptide sequence in human %%%collagen%%% XVIII. The synthetic gene consisted of 20 codons in preference in methylotropic %%%yeast%%%-Pichia pastoris and was cloned into expression vector pPICZ alpha A; and the recombinant protein was expressed in P. pastoris strain SMD1168 and purified to near homogeneity using heparin affinity chromatography. The amount of expressed recombinant protein in cultural media using described strategy was 80 mg/l in shake flask cultivation and 435 mg/l in high-density bioreactor %%%fermentation%%%. Methylthiazolium assay demonstrated that human endostatin expressed in P. pastoris using artificial synthetic gene of preference in P. pastoris was able to inhibit the acidic fibroblast growth factor-induced proliferation of endothelial cells in vitro.

4/7/3
DIALOG(R)File 5:Biosis Previews(R)

18813289 BIOSIS NO.: 200600158684
Recombinant microbial systems for the production of human %%%collagen%%% and gelatin
AUTHOR: Baez Julio (Reprint); Olsen David; Polarek James W
AUTHOR ADDRESS: FibroGen Inc, 225 Gateway Blvd, San Francisco, CA 94080 USA **USA
AUTHOR E-MAIL ADDRESS: jbaez@fibrogen.com

JOURNAL: Applied Microbiology and Biotechnology 69 (3): p245-252 DEC 2005 2005
ISSN: 0175-7598
DOCUMENT TYPE: Article; Literature Review
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: The use of genetically engineered microorganisms is a cost-effective, scalable technology for the production of recombinant human %%%collagen%%% (rhC) and recombinant gelatin (rG). This review will discuss the use of %%%yeast%%% (Pichia pastoris, Saccharomyces cerevisiae, Hansenula polymorpha) and of bacteria (Escherichia coli, Bacillus brevis) genetically engineered for the production of rhC and rG. P pastoris is the preferred production system for rhC and rG. Recombinant strains of P pastoris accumulate properly hydroxylated triple helical rhC intracellularly at levels up to 1.5 g/l. Coexpression of recombinant %%%collagen%%% with recombinant prolyl hydroxylase results in the synthesis of hydroxylated %%%collagen%%% with thermal stability similar to native collagens. The purified hydroxylated rhC forms fibrils that are structurally similar to fibrils assembled from native %%%collagen%%%. These qualities make rhC attractive for use in many medical applications. P pastoris can also be engineered to secrete high levels (3 to 1,4 g/l) of %%%collagen%%% fragments with defined length, composition, and physiochemical properties that serve as substitutes for animal-derived gelatins. The replacement of animal-derived %%%collagen%%% and gelatin with rhC and rG will result in products with improved safety, traceability, reproducibility, and quality. In addition, the rhC and rG can be engineered to improve the performance of products containing these biomaterials.

4/7/4
DIALOG(R)File 5:Biosis Previews(R)

17040645 BIOSIS NO.: 200200634156
Control of recombinant human endostatin production in fed-batch cultures of Pichia pastoris using the methanol feeding rate
AUTHOR: Li Zheng Jian (Reprint); Zhao Qinghua; Liang Hong; Jiang Shunlin; Chen Tom; Grella Davida; Shearon Colleen; Bottaro Donald P; Sim B Kim Lee
AUTHOR ADDRESS: EntreMed Inc., 9640 Medical Center Drive, Rockville, MD, 20850, USA, USA**USA
JOURNAL: Biotechnology Letters 24 (19): p1631-1635 October 2002 2002 2002
MEDIUM: print
ISSN: 0141-5492
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Endostatin is a 20 kDa carboxyl-terminal fragment of %%%collagen%%% XVIII that strongly inhibits angiogenesis and tumor growth. The methylotrophic %%%yeast%%%, Pichia pastoris, is a robust expression system that can be used to study methods to improve the yields of rhEndostatin. We expressed rhEndostatin in P. pastoris under the control of the alcohol oxidase 1 (aox 1) promoter (Mut+ phenotype) as a model, and used a cell biomass of about 50 g l-1 dry cell wt as a starting point for the induction phase and varied the methanol feed rate

at 8 ml l-1 h-1, 11 ml l-1 h-1 and 15 ml l-1 h-1. While the cell growth rate was proportional to the rate of methanol delivery, protein production rate was not. These findings could be used to guide parameters for large-scale production of recombinant proteins in the P. pastoris system.

4/7/5
DIALOG(R)File 5:Biosis Previews(R)

16184816 BIOSIS NO.: 200100356655
High-level production of human type I %%%collagen%%% in the %%%yeast%%% Pichia pastoris
AUTHOR: Nokelainen Minna; Tu Hongmin; Vuorela Annamari; Notbohm Holger; Kivirikko Kari I; Myllyharju Johanna (Reprint)
AUTHOR ADDRESS: Department of Medical Biochemistry, University of Oulu, FIN-90014, Oulu, Finland**Finland
JOURNAL: Yeast 18 (9): p797-806 30 June, 2001 2001
MEDIUM: print
ISSN: 0749-503X
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Four human genes, two of them encoding the proalpha1 and proalpha2 chains of type I procollagen and two of them the two types of subunit of prolyl 4-hydroxylase (4-PH), were integrated into the genome of Pichia pastoris. The proalpha1 and proalpha2 chains expressed formed type I procollagen molecules with the correct 2:1 chain ratio, and the 4-PH subunits formed an active enzyme tetramer that fully hydroxylated the proalpha chains. Chains lacking their N but not C propeptides formed pCcollagen molecules with the 2:1 chain ratio and, surprisingly, the expression levels of pCcollagen were 1.5-3-fold relative to those of procollagen. Both types of molecule could be converted by pepsin treatment to %%%collagen%%% molecules that formed native-type fibrils in vitro. The expression levels obtained for the pCcollagen using only single copies of each of the four genes and a 2 l %%%fermenter%%% ranged up to 0.5 g/l, indicating that it should be possible to optimize this system for high-level production of recombinant human type I %%%collagen%%% for numerous medical applications.

4/7/6
DIALOG(R)File 5:Biosis Previews(R)

16106366 BIOSIS NO.: 200100278205
Strength of mid-logarithmic and stationary phase Saccharopolyspora erythraea hyphae during a batch %%%fermentation%%% in defined nitrate-limited medium
AUTHOR: Stocks Stuart M; Thomas Colin R (Reprint)
AUTHOR ADDRESS: School of Chemical Engineering, University of Birmingham, B15 2TT, Birmingham, UK**UK
JOURNAL: Biotechnology and Bioengineering 73 (5): p370-378 June 5, 2001 2001
MEDIUM: print

ISSN: 0006-3592
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: A method for measuring mechanical properties of Saccharopolyspora erythraea is reported with data from a batch %%%fermentation%%%. Briefly, hyphae were glued to the end of a tungsten filament mounted horizontally on a sensitive force transducer. Free ends of hyphae were trapped against a flat surface by a second probe. The force transducer and tungsten filament were then moved at a fixed rate, the hypha were strained, and the force resisting motion recorded. From these data the maximum force resisting motion is taken as the force at which breakage occurs. Hyphae from the mid-logarithmic phase of a simple batch %%%fermentation%%% on defined medium were found to have a breaking force of 890 +- 160 nN (95% confidence), while stationary phase hyphae were weaker at 580 +- 150 nN. Video recordings of the experiments allowed an approximation of breaking strain, which did not differ significantly between samples at 0.18 +- 0.03. Electron microscopy was used to measure cell wall thickness, cell diameter, and hence cell wall cross-sectional area. The ultimate tensile strength was estimated to be 24 +- 3 MPa with no difference between the two samples, the lower breaking force of the stationary phase hyphae being attributed to a thinner cell wall. Assuming a linear relationship between stress and strain, the elastic modulus was estimated to be 140 +- 30 MPa. These values are comparable with other structural biological materials such as %%%yeast%%% cell walls and %%%collagen%%%.

4/7/7
DIALOG(R)File 5:Biosis Previews(R)

15148614 BIOSIS NO.: 199900408274
High-yield secretion of recombinant gelatins by Pichia pastoris
AUTHOR: Werten Marc WT (Reprint); Van Den Bosch Tanja J; Wind Richele D; Mooibroek Hans; De Wolf Frits A
AUTHOR ADDRESS: Agrotechnological Research Institute (ATO-DLO), Bornsesteeg 59, 6708 PD, Wageningen, Netherlands**Netherlands
JOURNAL: Yeast 15 (11): p1087-1096 Aug., 1999 1999
MEDIUM: print
ISSN: 0749-503X
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Recombinant non-hydroxylated gelatins based on mouse type I and rat type III %%%collagen%%% sequences were secreted from the methylotrophic %%%yeast%%% Pichia pastoris, using the Saccharomyces cerevisiae alpha-mating factor prepro signal. Proteolytic degradation could be minimized to a large extent by performing %%%fermentations%%% at pH 3.0 and by adding casamino acids to the medium, even though gelatin is extremely susceptible to proteolysis due to its open, unfolded structure. Proteolytic cleavage at specific mono-arginylic sites, by a putative Kex2-like protease, could be successfully abolished by site-directed mutagenesis of these sites. Production levels as high as 14.8 g/l clarified both were obtained, using multicopy tranformants. To our knowledge, this represents the highest level of heterologous protein

secretion reported to date for P. pastoris.

4/7/8
DIALOG(R)File 5:Biosis Previews(R)

14023356 BIOSIS NO.: 199799657416
Complex of proteolytic enzymes obtained by Streptomyces hygroscopicus. Production, isolation and properties
AUTHOR: Gojgic-Cvijovic Gordana Vvanka Karadzic (Reprint); Vucetic Jovan
AUTHOR ADDRESS: Inst. Chem. Technol. Metallurgy, Dep. Chemistry, Njegoseva 12, Belgrade, Yugoslavia**Yugoslavia
JOURNAL: Mikrobiologija (Zemun) 33 (1): p63-74 1996 1996
ISSN: 0581-1538
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: The antibiotic-producing strain Streptomyces hygroscopicus produced an extracellular proteolytic complex active towards: casein, %%%collagen%%%, elastin, heat killed cells of Gram negative E. coli bacteria and also showed trypsin-like and aminopeptidase activities. The crude proteolytic complex isolated from the %%%fermentation%%% broth by precipitation due to ammonium sulfate is a neutral protease, calcium dependent and not thermostable. During the %%%fermentation%%% process the maximum proteolytic activity is attained at the end of the logarithmic growth phase. The highest yield of the proteolytic enzyme complex is obtained in the medium containing 1.5% glucose and 1% %%%yeast%%% extract. The quantity of 5 mmol/L phosphates and 0.35% sodium chloride, as well as the stimulative effect (2-4 times increase) are achieved by the addition of E. coli cells (0.25%, w/V) to the medium.

4/7/9
DIALOG(R)File 5:Biosis Previews(R)

04937317 BIOSIS NO.: 197662033456
EVALUATION OF MANNICH BASES AND RELATED COMPOUNDS AS INHIBITORS OF MITOCHONDRIAL FUNCTION IN %%%YEAST%%% AND INHIBITION OF BLOOD PLATELET AGGREGATION BLOOD CLOTTING AND IN-VITRO METABOLISM OF 5 DI METHYLAMINO-1-PHENYL-1-PENTEN-3-ONE HYDRO CHLORIDE
AUTHOR: DIMMOCK J R; HAMON N W; HINDMARSH K W; MILLS D G; NEGRAVE L E; RANK G H; ROBERTSON A J
JOURNAL: Journal of Pharmaceutical Sciences 65 (4): p482-488 1976
ISSN: 0022-3549
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: Unspecified

ABSTRACT: 5-Dimethylamino-1-phenyl-1-penten-3-one chloride (I.alpha.) and 32 analogs were tested for inhibition of respiratory-dependent growth in Saccharomyces cerevisiae. Of the 33 compounds tested, 13 appeared to affect mitochondrial function, since the inhibition of respiratory-dependent growth was statistically greater than the inhibition of growth on %%%fermentable%%% energy sources. Inhibition of

mitochondrial function in %%%yeast%%% and growth inhibition of an in vitro culture of human epidermoid carcinoma (KB) were positively correlated since 83% of the compounds tested either had mitochondrial-inhibiting properties and significant activity in the KB test or were inactive in both tests. Similarly, 78% of compounds tested showed murine toxicity and mitochondrial inhibition or had no effect on murine toxicity and %%%yeast%%% mitochondrial function. Injection of I.alpha. into rats resulted in the appearance of blood in the urine and feces. Compound I.alpha. inhibited ADP and %%%collagen%%%-induced aggregation of rat platelets but had no effect on blood clotting. TLC, following incubation of I.alpha. with a rat liver extract, showed that the structure of I.alpha. was not enzymatically modified and indicated activity per se on platelet aggregation and mitochondrial function.

4/7/10
DIALOG(R)File 5:Biosis Previews(R)

0000419537 BIOSIS NO.: 19411500016793
The carbohydrate in %%%collagen%%%
AUTHOR: BEEK JOHN
AUTHOR ADDRESS: Nation. Bur. Standards, Washington
JOURNAL: JOUR AMER CHEM SOC 63 ((5)): p1483 1941 1941
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: Unspecified

ABSTRACT: The sugars of hydrolyzed %%%collagen%%% are not %%%fermentable%%% with a galactose-active %%%yeast%%%. Added d-galactose is %%%fermented%%% ; hence neither d-glucose nor d-galactose forms any considerable part of the carbohydrate in %%%collagen%%%, as previously reported. The sugars present may be l-glucose and l-galactose. ABSTRACT AUTHORS: E. E. Snell

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? s hide? and fermentation
           2924  HIDE?
          64153  FERMENTATION
     S5      12  HIDE? AND FERMENTATION
? t s5/7/1-12
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5/7/1
DIALOG(R)File 5:Biosis Previews(R)

0019603257 BIOSIS NO.: 200700262998
Effect of high pressure homogenisation on the capacity of Lactobacillus plantarum A6 to ferment rice/soybean slurries to prepare high energy density complementary food
AUTHOR: Nguyen Thi Thanh Thuy; Guyot Jean-Pierre; Icard-Verniere Christele; Rochette Isabelle; Loiseau Gerard (Reprint)
AUTHOR ADDRESS: CIRAD, UR Qual Aliments Trop, TA 50-16,73 Rue Jean Francois Breton, F-34398 Montpellier 5, France**France
AUTHOR E-MAIL ADDRESS: loiseau@cirad.fr
JOURNAL: Food Chemistry 102 (4): p1288-1295 2007 2007
ISSN: 0308-8146
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: New bioprocesses to prepare high energy density (HED) gruels for complementary young child feeding are being developed based on the ability of amylolytic lactic acid bacteria (ALAB) to modify the rheological characteristics of cereal-based slurries, provided appropriate pretreatment are applied. Gelatinisation is a common pre-treatment which could be implemented to enhance the action of amylases, and has been successfully used in a former study (Nguyen, T. T. T., Loiseau, G., Icard-Verniere, C., Rochette, I., Treche, S., & Guyot, J.-P. (2007). Effect of %%%fermentation%%% by amylolytic lactic acid bacteria in process combinations on characteristics of rice/soybean slurries: a new method to prepare high energy density complementary foods for young children. Food Chemistry, 100, 623-631.) in combination with ALAB to prepare from a blend of rice/soybean flours semi-liquid fermented HED gruels with a high dry matter (DM) content (23-32%). In this study, it is shown that a mild pre-heating treatment which consists in suspending a rice/soybean flour blend in hot water (70 degrees C) combined with high pressure homogenisation (HPH) can substitute gelatinisation before %%%fermentation%%% by the ALAB Lactobacillus plantarum A6 to prepare HDE gruels after cooking of the fermented slurry. As an alternative, allowing better condition of handling and storage, spray drying can be applied to such pre-heated HPH treated fermented slurries to obtain fermented flours which can be used further to prepare %%%HIDE%%% gruels.

5/7/2
DIALOG(R)File 5:Biosis Previews(R)

16529203 BIOSIS NO.: 200200122714
Gene encoding a polypeptide having nitrile hydratase activity, a transformant containing the gene and a process for the production of amides using the transformant
AUTHOR: Yamada H; Nagasawa T; Beppu T; Horinouch S; Nishiyama M
AUTHOR ADDRESS: 19-1, Matsugasaki Kinomotocho, Sakyo-ku, Kyoto-fu, Kyoto-shi, Japan**Japan
JOURNAL: Official Gazette of the United States Patent and Trademark Office Patents 1213 (1): p562 Aug. 4, 1998 1998
MEDIUM: print
ISSN: 0098-1133
DOCUMENT TYPE: Patent
RECORD TYPE: Citation
LANGUAGE: English

5/7/3
DIALOG(R)File 5:Biosis Previews(R)

16227799 BIOSIS NO.: 200100399638
Coprophagy in leporids and other mammalian herbivores
AUTHOR: Hirakawa Hirofumi (Reprint)
AUTHOR ADDRESS: Forestry and Forest Products Research Institute, Hitsujigaoka 7, Toyohira, Sapporo, 062-8516, Japan**Japan
JOURNAL: Mammal Review 31 (1): p61-80 March, 2001 2001
MEDIUM: print

ISSN: 0305-1838
DOCUMENT TYPE: Article; Literature Review
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Leporids have long been known to reingest soft faeces. However, it was recently found that they regularly reingest hard faeces, too. During the daytime, both soft and hard faeces are defecated and all of the faeces are reingested. Excreted at night are the hard faeces, which are normally discarded but reingested in starvation. The separation mechanism in the proximal colon, which diverts fine particles into the caecum and thus only passes large food particles, produces hard faeces. When the mechanism ceases acting, fermented caecal materials are excreted as soft faeces. The reingestion of soft faeces, rich in vitamins and microbial proteins, is physiologically imperative. Hard faeces are basically a refuse, but their thorough mastication at reingestion reduces poorly digestible large particles to fine ones good for %%%fermentation%%%. The regular reingestion of daytime hard faeces thus promotes food digestibility. The temporary use of night-time hard faeces allows leporids to do without food for some time. It thus gives leporids behavioural flexibility and thereby an ecological advantage. Reingestion is also known in other small- to medium-sized herbivores, which are all caecal fermenters. Morphological differentiation between faeces is reported only in larger species, but all ingested faeces are found to be richer in nutrients than discarded ones. Thus a separation mechanism is probably present in all reingesting species. Reingestion activity is deeply related to other behavioural and physiological traits of small mammalian herbivores, hence its study is important to understanding of their ecology and biology. Leporids are the largest of the reingesting species except for the semi-aquatic Coypu, and reingestion by leporids is certainly the most sophisticated. This development of a reingestion-involved digestive system has probably brought them to their present niche, as terrestrial medium-sized generalist mammalian herbivores, and consequently made their characteristic %%%hide%%%-and-run lifeforms by exposing them to a strong predation pressure.

14151682 BIOSIS NO.: 199799785742
Kefir production in Iran
AUTHOR: Motaghi M; Mazaheri M (Reprint); Moazami N; Farkhondeh A; Fooladi M H; Goltapeh E M
AUTHOR ADDRESS: Biotechnol. Centre, Iranian Res. Organization Sci. Technol. No. 71 Forsat St., Enghelab Ave., Tehran, Iran**Iran
JOURNAL: World Journal of Microbiology and Biotechnology 13 (5): p579-581 1997 1997
ISSN: 0959-3993
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Kefir grains were prepared in a goat-%%%hide%%% bag using pasteurized milk inoculated with sheep intestinal flora, followed by culture of the surface layer in milk. From the grain, 11 strains of

lactic acid bacteria, non-lactic acid bacteria and yeasts were isolated and identified. Six samples of kefir were prepared by fermenting pasteurized milk for different lengths of time. Sensory evaluation identified the sample prepared by 24 h %%%fermentation%%% as the best product.

5/7/5
DIALOG(R)File 5:Biosis Previews(R)

13238812 BIOSIS NO.: 199698706645
Herbivorous ruminants
BOOK TITLE: [Nutrition of domestic ruminants: Ingestion and digestion]
ORIGINAL LANGUAGE BOOK TITLE: Nutrition des ruminants domestiques: Ingestion et digestion
AUTHOR: Jarrige R; Ruckebusch Y; Demarquilly C (Reprint)
BOOK AUTHOR/EDITOR: Jarrige R (Editor); Ruckebusch Y (Editor); Demarquilly C (Editor); Farce M-H (Editor); Journet M (Editor)
AUTHOR ADDRESS: INRA, Station Recherches Nutr. Herbivores, Theix 63122 Saint Genes, Champanelle, France**France
p7-24 1995
BOOK PUBLISHER: INRA (Institut National de la Recherche Agronomique) {a}, 147 rue de l'Universite, 75007 Paris, France
ISBN: 2-7380-0629-9
DOCUMENT TYPE: Book; Book Chapter
RECORD TYPE: Citation
LANGUAGE: French

5/7/6
DIALOG(R)File 5:Biosis Previews(R)

12303944 BIOSIS NO.: 199497325229
The ecology of the dog large intestine, digestive intolerance and dietary dermatitis
AUTHOR: Buttin P (Reprint); Sergheraert R
AUTHOR ADDRESS: 9 rue Mgr. Trehiou, 56000 Vannes, France**France
JOURNAL: Recueil de Medecine Veterinaire de l'Ecole d'Alfort 169 (11-12): p885-893 1993 1993
ISSN: 0034-1843
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: French

ABSTRACT: The dog exhibits a large digestive tolerance which can %%%hide%%% certain perturbations. These problems may only be seen at weaning, in stressful situations (eg. sport), or in breeds or individuals which are sensitive. An excess of certain nutrients, a poorly balanced diet or ingredients of mediocre quality can induce a dysfunction in particular phases of digestion and provoke an imbalance in the ecology of the large intestine. The large intestine is a fermenter which receives all the nutrients undigested in the small intestine. An excess or deficiency in certain %%%fermentation%%% substrates disrupts the equilibrium of this system. The result of which is the increased formation of metabolites such as biogenic amines (which can be badly tolerated) or the appearance

of bacterial toxins. It is then possible to see digestive or cutaneous pathology resulting from this disbalance and not from a specific pathogenic organism or from an allergic process.

5/7/7
DIALOG(R)File 5:Biosis Previews(R)

08395711 BIOSIS NO.: 198733002316
METHOD FOR CULTIVATION OF PSEUDOMONAS BACTERIA US PATENT-4661457. APRIL 28 1987
AUTHOR: YAMADA H (Reprint); ENOMOTO K; WATANABE I
AUTHOR ADDRESS: ASSIGNEE YAMADA, HIDEAKI
JOURNAL: Official Gazette of the United States Patent and Trademark Office Patents 1077 (4): p2278 1987
ISSN: 0098-1133
DOCUMENT TYPE: Patent
RECORD TYPE: Citation
LANGUAGE: ENGLISH

5/7/8
DIALOG(R)File 5:Biosis Previews(R)

08395709 BIOSIS NO.: 198733002314
METHOD FOR CULTIVATION OF PSEUDOMONAS BACTERIA US PATENT-4661456. APRIL 28 1987
AUTHOR: YAMADA H (Reprint); RYUNO K; ENOMOTO K; WATANABE I
AUTHOR ADDRESS: ASSIGNEE YAMADA, HIDEAKI
JOURNAL: Official Gazette of the United States Patent and Trademark Office Patents 1077 (4): p2278 1987
ISSN: 0098-1133
DOCUMENT TYPE: Patent
RECORD TYPE: Citation
LANGUAGE: ENGLISH

5/7/9
DIALOG(R)File 5:Biosis Previews(R)

04964012 BIOSIS NO.: 197662060151
FERMENTATIVE PRODUCTION OF ALKALINE PROTEINASE BY BACILLUS-PUMILUS STRAIN 209 AND SOME PROPERTIES OF THE ENZYME
AUTHOR: HONAN SCI RES INST LEATHER IND
JOURNAL: Weishengwu Xuebao 15 (4): p330-334 1975
ISSN: 0001-6209
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: Unspecified

ABSTRACT: Of 880 bacterial strains, No. 209 was selected for the production of proteinase for unhairing %%%hide%%% and skin in the leather industry. It was identified as B. pumilus. %%%Fermentation%%% conditions for enzyme production were established: composition of the medium (%) is soy-bean

meal 2.5-3.5, wheat bran 3.5-4.5, Na2HPO4 0.4, KH2PO4 0.03, CaCl2 0.3, and Na2CO3 0.5, pH 9.0. After %%%fermentation%%% in 50 l fermentor at 35-36.degree. C, with an aeration rate of 1:0.5-1:1 for 31 h, the enzyme activity was about 5000 units/ml of terminated liquor (broth). The optimum pH for enzyme action is 9-11; the optimum temperature is 50.degree. C. No loss of activity was found when it was stored in a plastic bag for 11 mo. The enzyme preparation is non-toxic to mice.

5/7/10
DIALOG(R)File 5:Biosis Previews(R)

0001562099 BIOSIS NO.: 19654600076197
Studies on the enteropathogenic, facultatively halophilic bacteria, Vibrio parahaemolyticus. I. Morphological, cultural and biochemical properties and its taxonomical position
AUTHOR: SAKAZAKI RIICHI; IWANAMI SETSUO; FUKUMI HIDEO
AUTHOR ADDRESS: Nat. Inst. Health, Tokyo, Jap.
JOURNAL: JAP J MED SCI BIOL 16 ((4)): p161-188 1964 1964
DOCUMENT TYPE: Article
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ABSTRACT: Cultures 1,702 of facultatively halophilic bacteria implicated in food poisoning caused by sea-fish and their products were examined for morphological, cultural and biochemical properties and susceptibility to antibiotics and the vibriostatic agent 0/129 in comparison with 34 Vibrio and 133 Aeromonas hydrophila cultures. All cultures of the halophilic organisms from the feces of humans formed a compact group in the genus Vibrio. The basic similarity of the halophilic organisms indicated them to be members of a single species. The name "Vibrio parahaemolyticus" was proposed for this species. This species was divided into 2 subgroups on the baiss of growth in peptone water containing 7 and 10% NaCl, Voges-Proskauer reaction and sucrose and arabinose %%%fermentation%%%. The members of subgroup-1 might be non-choleragenic enteropathogenic, but the pathogenicity of the members of subgroup-2 is not definite. Some of the differential properties between Vibrio and Aeromonas noted by Davis and Park (1962) were confimed. Growth in peptone water containing no NaCl, utilization of d-tartrate, chitin and %%%hide%%% powder, and sensitivity to novobiocin, oleandomycin and leucomycin were of diagnostic value for the differentiation between the genera Vibrio and Aeromonas. Miyamoto's proposal of the generic name Oceanomonas for the halophilic organisms was discussed. ABSTRACT AUTHORS: Authors

5/7/11
DIALOG(R)File 5:Biosis Previews(R)

0000400855 BIOSIS NO.: 19401400015172
An ecological study of the coliform bacteria
AUTHOR: GRIFFIN A M; STUART C A
JOURNAL: JOUR BACT 40 ((1)): p83-100 1940 1940
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: Unspecified

ABSTRACT: 6577 strains of coliform organisms from milk, water, soil, grains, barn dust and cow %%%hides%%%, and human and bovine feces were typed by means of the IMViC (indol, methyl-red, Voges-Proskauer, citrate, and cellobiose) reactions. Statistical analysis of the results indicated that Aerobacter and intermediate strains are normal inhabitants of non-fecal environments, and Escherichia are normal in feces. Occurrence otherwise was considered adventitious. Studies of strains varying in IMViC reactions indicated that indol production, by virtue of its greater stability, is preferable to citrate utilization for use in conjunction with the Voges-Proskauer reaction in determination of the sections of the coliform group. The advisability of speciation within the genus Aerobacter, and the significance of aberrant lactose %%%fermentation%%% are discussed. ABSTRACT AUTHORS: A. M. Griffin

0000309967 BIOSIS NO.: 19361000001450
Abstracts of papers presented at 35th Annual Meeting, Philadelphia, Pennsylvania, December 27-29, 1933
AUTHOR: SOCIETY OF AMERICAN BACTERIOLOGISTS
JOURNAL: JOUR BACT 27 ((1)): p22-108 1934 1934
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: Unspecified

ABSTRACT: H. J. CONN, Chairman, VICTOR BURKE, IVAN C. HALL, J. A. KENNEDY, BARNETT COHEN, and ELIZABETH F. GENUNG, Report of the Committee on bacteriological technic: Progress during 1933, p.22.[long dash]H. H. WALKER, C.-E. A. WINSLOW, EVELYN HUNTINGTON, and M. GRACE MOONEY, The physiological youth of bacteria as evidenced by cell metabolism, p.22.[long dash]JAMES M. SHERMAN and GEORGE M. CAMERON, Rate of growth and viability in Bacterium coli, p.23.[long dash]-ERNEST A. PRIBRAM and LOUIS KOTLER, Studies on the micrometabolism of yeast cells, p.24.[long dash]MICHAEL A. FARRELL, Production of peroxidase by streptococci and its possible significance, p.24.[long dash]M. A. INGRAHAM and C. A. BAUMANN, The synthesis of carotene by bacteria, p.25.[long dash]HAROLD R. CURRAN, The influence of some environmental factors upon the thermal resistance of bacterial spores, p.26.[long dash]B. C. BRUN-STETTER and C. A. MAGOON, The rate at which spores of B. mycoides Flugge, suspended in peptone solution, become stainable, p.27.[long dash]ROGER D. REID, Some observations on the ability of a mold [Penicillium notatum] or its metabolic products to inhibit bacterial growth, p.28.[long dash]LESLIE A. SANDHOLZER and RALPH P. TITTSLER, The bacteriostatic effect of indol and skatol, p.28.[long dash]MARY V. REED and ELIZABETH F. GENUNG, The effect of certain triphenyl methane dyea on Staphylococcus aureus and Bacterium coli com-munior, p.29.[long dash]J. J. REID and I. L. BALDWIN, The effect of the oxidation-reduction character of the medium on initiation of yeast growth, p.29.[long dash]MARIE ECK-HARDT CONKLIN, Mercurochrome as a bacteriological stain, p.30[long dash]WM. C. FRAZIER and A. J. BOYER, A method for distinguishing living from dead cells of Gram-positive bacteria by stained preparations, p.31.[long dash]ROBB SPALDING SPRAY Semisolid media in cultivation and differentiation of anaerobes, p.32.[long dash]EINAR LEIFSON, A new medium for the isolation of

intestinal pathogens, p.32.[long dash]LUBOW A. MARGOLENA and P. ARNE HANSEN, The Endo medium as a trapping agent and indicator for aldehyde, p.33.[long dash]H. J. CONN and MARY A. DARROW, Can the Endo medium be standardized?, p.33.[long dash]IDA A. BENGTSON, The problem of favorable culture media for the isolation of Bacterium granulosis, p.34.[long dash]L. S. McCLUNG and ELIZABETH McCOY, A corn-liver medium for the detection and dilution counts of various anaerobes, p.35. [long dash]FRANK C. SCHMELKES, HENRY C. MARKS, ISABELLE B. ROMANS, ELIZABETH S. HORNING, and ALBERT F. GUITERAS, Azochloramid, a new selective bactericidal chlorine compound, p.36.[long dash]ERNEST C. McCULLOCH, The germicidal efficiency of hypochlorite solutions in the presence of chicken manure, p.37.[long dash]DAVID B. CHARLTON and MAX LEVINE, The survivor curves exhibited by bacterial spores in chlorine disinfection, p.37.[long dash]LENORE M. KOPELOFF, JOHN L. ETCHELLS, and NICHOLAS KOPELOFF, Acidophilus milk at room and ice-box temperatures, p.38.[long dash]JAMES E. WEISS and LEO F. RETTGER, Lactobacillus bifidus Tissier and its biological position in the group of aciduric organisms, p.39. [long dash]STANLEY E. HARTSELL and LEO F. RETTGER, A taxonomic study of "Cl. putrificum" and its establishment as a definite entity[long dash]Cl. lentoputrescens, nov. spec, p.39.[long dash]JANET R. McCARTER and E. G. HASTINGS, The classification of acid-fast bacteria, p.41.[long dash]L. A. ROGERS, The constancy of essential characters in Lactobacillus acidophilus, p.41.[long dash]RALPH T. TITTS-LER, and LESLIE A. SANDHOLZER, Studies on the Escherichia-Aerobacter intermediates, p.42.[long dash]LELAND W. PARR, The occurrence and significance of so-called atypical reactions in the colon-aerogenes group, p.42.[long dash]F. W. FABIAN and N. B. McCULLOUGH, Dissociation in yeasts, p.43.[long dash]THOMAS C. GRUBB and STEWART A. KOSER, Coccus forms of C. diphtheriae, p.45. [long dash]MARY E. RANEY and NICHOLAS KOPELOFF, Dissociation and filtration studies with L. acidophilus, p.45.[long dash]ALDEN F. ROE, Dissociation of Cl. welchii, p.46. [long dash]AGNES J. QUIRK, The correlation of animal and plant bacterial behavior and imposed culture medium environment, p.47[long dash]J. H. ORR and G. B. REED, Variation in Cl. tetani, p.48.[long dash]JEAN BROADHURST, Fungous phases in bacteria: Zygotes and sporangia, p.48.[long dash]JOHN D. LeMAR and JOHN T. MYERS, The artificial production of a specific lytic agent which behaves like bacteriophage, p.49.[long dash]ALICE C. EVANS, Streptococcus bacteriophage and its usefulness for the identification of strains of hemolytic streptococci, p.49.[long dash]MORRIS L. RAKIETEN, The adaptation of staphy-lococcus bacteriophage to an artificially produced anti-staphylococcus bacteriophagic serum, p.50.[long dash]H. J. CONN and MARY A. DARROW, An extremely economical sugar %%%fermentation%%%, p.51.[long dash]ROBERT L. STARKEY, Cultivation of organisms concerned in the oxidation of thiosulfate in mineral media, p.52.[long dash]ROBERT L. STARKEY, Products of the oxidation of thiosulfate by bacteria in mineral media, p.53.[long dash]NATHAN R. SMITH. Strain variation of azotobacter and the utilization of carbon compounds, p.54.[long dash]LEWIS T. LEONARD, The nodule organism of Mimosa pudica L, p.55.[long dash]F. S. OR-CUTT, A. M. SHANNON and P. W. WILSON, Concerning the fixation of nitrogen by germinating seeds of leguminous plants, p.55.[long dash]C. RHINES, The persistence of tubercle bacilli in soil and the effect of various soil microorganisms on tubercle bacilli, p.56.[long dash]ELIZABETH McCOY, A serological study of certain butyric anaerobes of soil, p.56.[long dash]M. P. H0RW00D and ARTHUR HEIFETZ, A comparative study of certain presumptive test media, p.57.[long dash]F. T. WILLIAMS and E. B. FRED, The influence of concentration of soluble calcium on the precipitation of calcium carbonate by microorganisms, p.58.[long

dash]MELVIN C. ALLEN, The decomposition of alginic acid by microorganisms, p.59.[long dash]E. J. CAMERON, "Black beets"[long dash]a problem involving stimulation of bacterial growth by iron, p.60.[long dash]J. R. SANBORN, The utilization of slime-forming microorganisms, p.61.[long dash]A. G. LOCHHEAD, Bacteriological studies of the red discoloration of salted %%%hides%%%, p.61.[long dash]C. E. SENSEMAN, An apparatus for the control of composition and rate of flow of gas mixtures through culture solutions, p.62.[long dash]C. R. FELLERS and E. G. SMITH, The %%%fermentation%%% of citron, p.63.[long dash]L. S. Mc-CLUNG, Production of agglutinins against thermophilic organisms, p.64.[long dash]E. H. RUYLE and F. W. TANNER, The microbiology of canned meat products, p.64.[long dash]HARRY E. GORESLINE, Use of the spiral absorber for the determination of carbon dioxide, p.65.[long dash]M. P. H0RW00D, B. S. GOULD, and H. SHWACHMAN, The numbers and types of bacteria surviving in house- hold dusts after storage in sealed containers for two years, p.66.[long dash]L. A. BURKEY, An improvement in the methylene blue reduction test, p.67.[long dash]JAMES T. Mc-GRATH and J. A. ANDERSON, Lipolytic activities of several bacteria causing bitter cream, p.68.[long dash]J. A. ANDERSON, An agar plate method for the detection and enumeration of lipolytic microorganisms, p.69.[long dash]COSTANTINO GORINI, The acidoproteolytes in gaseous associative %%%fermentation%%% in milk, p.69.[long dash]CARL S. PEDERSON and M. W. YALE, The effect of the temperature of incubation upon the agar plate count of milk, p.70.[long dash]CHESTER S. BOWERS and G. J. HUCKER, The composition of standard media for use in routine milk control work, p.71.[long dash]HARRY E. GORESLINE, A new species belonging to the genus Bacillus, p.72.[long dash]DOROTHY W. CALDWELL, NEIL J. PARKER, and EDGAR M. MEDLAR, Studies on a herd infected with Brucella abortus. II. Incidence of milk infection in a vaccinated herd, p.72.[long dash]R. A. BOAK and C. M. CARPENTER, Brucella melitensis infection in cattle, p.73.[long dash]G. J. HUCKER and P. ARNE HAN-SEN, The bacteriology of chronic mastitis, p.73.[long dash]W. N. PLASTRIDGE, E. R. SPAULDING, and G. D. BRIG-HAM, Observations on organisms associated with chronic bovine mastitis, p.74.[long dash]LESLIE T. WEBSTER and GEORGE L. FITE, Etiology of encephalitis in St. Louis, 1933, and its differentiation by protection tests, p.74.[long dash]W. A. SAWYER and LORING WHITMAN, Specificity of the protection test in yellow fever, p.75.[long dash]T. P. HUGHES and MAX THEILER, Studies of circulating virus and antibodies in yellow fever infection in animals, p.76.[long dash]E. W. GOODPASTURE and G. J. BUDDINGH, Properties of vaccine cultivated in the chorio-allantoic membrane of chick embryos, p.76.[long dash]JAMES CRAIGIE, A comparison of the antigenic qualities of killed and living vaccine virus in the normal rabbit, p.77.[long dash]E. L. STUBBS, Age, breed and species susceptibility in transmissible leukosis, p.79.[long dash]J. FURTH, On filterable viruses of leukosis and sarcoma of chickens, p.79.[long dash]F. R. BEAUDETTE, Cloacal infection as a means of immunization against infectious laryngotracheitis of fowls, p.80.[long dash]CLAUS W. JUNGE-BLUT, Studies on the specificity of the inactivation of poliomyelitis virus by serum, p.81.[long dash]RICHARD E. SHOPE, A change in the contagious character of a strain of swine influenza, p.82.[long dash]R. A. BOAK, C. M. CARPENTER, and S. L. WARREN, Symptomatic herpetic manifestations following artificially induced fevers, p.83.[long dash]MAURICE BRODIE, Active immunization against poliomyelitis on monkeys, p.84.[long dash]SIDNEY D. KRAMER and M. SCHAEFER, Immunity to poliomyelitis. Active immunization, p.85.[long dash]THOMAS M. RIVERS and F. F. SCHWENTKER, Louping ill in man, p.85.[long dash]SOPHIA M. COHEN, Precipitation reactions of meningococcus strains with immune serum in agar plates in relation to antigenic

activity, p.85.[long dash]WALTER L. KULP and DAVID LACKMAN, A report of experimental immunization against Proteus hydrophilus, the etiological agent in "red-leg" disease of frogs, p.86.[long dash]EDNA G. JACKSON, Shigella ginto-tense (Castellani): Its occurrence in cultures from various sources, p.86.[long dash]RUTH CAMERON and LEO F. RETTGER, Attempts to demonstrate a specific toxin in Salmonella aertrycke (var. meleagridis), p.86.[long dash]JUS-TINA H. HILL and LEAH R. SEIDMAN, Bacterial invasions of the blood stream in urology, p.87.[long dash]A. E. STEARN, A new approach to the chemistry of immunity, p.88.[long dash]HAROLD A. ABRAMSON, The relation of the electrical charge of bacteria to their stability, p.89.[long dash]OSWALD T. AVERY and WALTHER F. GOEBEL, The chemo-immunological properties of the specific capsular polysaccharide of pneumococcus Type I, p.89.[long dash]LLOYD D. FELTON, Distribution of the immunizing antigen in the pneumococcus, p.90.[long dash]MICHAEL HEIDELBERGER and FORREST E. KENDALL, Quantitative studies on the precipitin reaction, p.90.[long dash]F. S. JONES and MARION ORCUTT, The prozone phenomenon in specific bacterial aggluti-nation, p.91.[long dash]SANFORD B. HOOKER and WILLIAM C. BOYD, The influence of the molecular weight of antigen on the proportion of antibody to antigen in precipitates, p.91.[long dash]EARL W. FLOSDORF and LESLIE A. CHAMBERS, Comparative antigenic studies on egg albumin denatured by intense audible sound and by other means, p.92.[long dash]REUBEN L. KAHN, Disimmuni-zation and accompanying phenomena, p.92.[long dash]REUBEN L. KAHN and ELIZABETH B. McDERMOTT, Serum reactions in the disimmunized state, p.94.[long dash]CAROLINE R. GURLEY, MARGARET CASTELDA, and RUTH GOLDBERG, Correlation of agglutinative types and endotoxin, p.94.[long dash]D. H. BERGEY and S. ETRIS, The antigenic value of unprecipitated and of alum precipitated tetanus toxoid, p.95.[long dash]S. ETRIS, The antigenic relation of diphtheria organisms of the Gravis and Mitis strains, p.96.[long dash]JULIA M. COFFEY, A comparative study of freshly isolated and stock strains of B. pertussis in relation to their antigenic properties, p.96.[long dash]PEARL KENDRICK and GRACE ELDERING, A study of B. pertussis cultures by means of animal inoculation, p.97.[long dash]RACHEL E. HOFFSTADT, GUY P. YOUMANS, and WESLEY CLARK, Antigenic structure of Staphy-lococcus aureus and its variants, p.97.[long dash]KENNETH GOODNER, Certain host factors involved in the protective action of antipneumococcus serum in experimental infections in rabbits, p.98 [long dash]GEORGE F. LEONARD and AUGUST HOLM, Utilization of carbo-hydrates and salts of organic acids by C. diphtheriae in the production of strong toxin, p.98.[long dash]G. D. CUM-MINGS, A strain of Cl. tetanus isolated from a human case of the disease, p.99.[long dash]CHRISTOPHER ROOS, JOHN REICHEL, and JANET CLARK, Biological characters of the G and M variants of a hemolytic streptococcus, p.99.[long dash]CHRISTOPHER ROOS, JOHN REICHEL, and JONATHAN E. WOOD, A toxic filtrate obtained from Hemophilus influenzae, p.100.[long dash]JOSEPH D. ARONSON and HOWARD J. HENDERSON, Tuberculosis of cold-blooded animals, p.101.[long dash]ES-MOND R. LONG, Experimental mouse tuberculosis, p.102.[long dash]LUCY MISHULOW, MARIE ROMANO, MILDRED MELMAN, and CAMILLE KERESZTURI, The utilization of the Bordet-Gengou and Lowenstein's media as a substitute for guinea-pig inoculation in detecting tubercle bacilli in sputums, p.103.[long dash]J. HOWARD BROWN, Double zone beta hemolytic streptococci, p. 104.[long dash]ELEANOR A. BLISS and PERRIN H. LONG, Studies on minute hemolytic streptococci. I. The cultural characteristics of minute hemolytic streptococci, p.105.[long dash]GRACE M. SICKLES and MYRTLE SHAW, A systematic study of microorganisms which decompose the specific carbohydrates of the pneumococcus, p.106.[long dash]L. A. BARNES and BENJAMIN WHITE, The

%%%fermentation%%% of glycogen by pneumococci, p.106.[long dash]L. A. BARNES and CHARLOTTE M. CLARKE, The pneu-mococcidal powers of Na oleate and Na ricinoleate, p.107.[long dash]F. M. HUNTOON, The characteristics of a probable new member of the Neisserieae, p.108. [long dash]R. C. HUSTON, I. FOREST HUDDLESON, and A. D. HERSHEY, The chemistry of the cellular constituenta of the genus Brucella, p.108.

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Set     Items   Description
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S3          1   S1 AND BACILLUS
S4         10   S1 AND YEAST
S5         12   HIDE? AND FERMENTATION
? s collagen and bacillus
          119947  COLLAGEN
           93304  BACILLUS
      S6     126  COLLAGEN AND BACILLUS
? s s6 and ferment?
             126  S6
           88234  FERMENT?
      S7       1  S6 AND FERMENT?
? s s6 and culture
             126  S6
          493633  CULTURE
      S8      20  S6 AND CULTURE
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 8/7/1
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18881830   BIOSIS NO.: 200600227225
%%%Bacillus%%% sp B16 kills nematodes with a serine protease identified as
  a pathogenic factor
AUTHOR: Niu Qiuhong; Huang Xiaowei; Tian Baoyu; Yang Jinkui; Liu Jiang;
  Zhang Lin; Zhang Keqin (Reprint)
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ABSTRACT: An endospore-forming bacterium, strain B16, was isolated from a
  soil sample and identified as a %%%Bacillus%%% sp. The strain presented
  remarkable nematotoxic activity against nematode Panagrellus redivivus.
  The crude extracellular protein extract from %%%culture%%% supernatant of
  the bacteria killed about 80% of the tested nematodes within 24 h,
  suggesting the involvement of extracellular proteases. A homogeneous
  extracellular protease was purified by chromatography, and the hypothesis
  of proteinaceous pathogeny in the infection of B16 strain was confirmed
  by the experiments of killing living nematodes and by the degradation of
  purified nematode cuticle when treated with the homogenous protease. The
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gene for the virulence protease was cloned, and the nucleotide sequence was determined. The deduced amino acid sequence showed significant similarity with subtilisin BPN' but low homology with the other cuticle-degrading proteases previously reported in fungi. Characterization of the purified protease revealed the molecular mass of 28 kDa and the optimum activity at pH 10, 50 degrees C. The purified protease can hydrolyze several native proteinaceous substrates, including %%%collagen%%% and nematode cuticle. To our knowledge, this is the first report of a serine protease from a %%%Bacillus%%% genus of bacteria that serves as a pathogenic factor against nematodes, an important step in understanding the relationship between bacterial pathogen and host and in improving the nematocidal activity in biological control.

8/7/2

18819624 BIOSIS NO.: 200600165019

Sequence of the gene for a high-alkaline mannanase from an alkaliphilic %%%Bacillus%%% sp strain JAMB-750, its expression in %%%Bacillus%%% subtilis and characterization of the recombinant enzyme

AUTHOR: Hatada Yuji (Reprint); Takeda Nobuhiro; Hirasawa Kazumichi; Ohta Yukari; Usami Ron; Yoshida Yasuhiko; Grant William D; Ito Susumu; Horikoshi Koki
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ABSTRACT: A novel alkaline mannanase Man26A has been found in the %%%culture%%% of an alkaliphilic %%%Bacillus%%% sp. strain JAMB-750 and the optimal pH for the mannanase activity of the enzyme was around pH 10 (J Biol Macromol 4: 67-74, 2004). This optimal pH is the highest among those of the mannanases reported to date. The gene man26A coding the enzyme was cloned from the genomic DNA of strain JAMB-750 and sequenced. It encodes a protein of 997 amino acids including a signal peptide. The N-terminal half (Glu27-Val486) of the enzyme exhibited moderate similarities to other mannanases belonging to glycoside hydrolase family 26, such as the enzymes from Cellvibrio japonicus (37% identity), Cellulomonas fimi (33% identity), and %%%Bacillus%%% sp. strain AM-001 (28% identity). The C-terminal half was found to contain four domains. The first, second, third, and fourth domains exhibited similarities to the carbohydrate-binding module, the mannan-binding module, the Homo sapiens %%%collagen%%% type IX alpha I chain, and the membrane anchor region of Gram-positive surface proteins, respectively. Its recombinant mannanase was produced extracellularly using %%%Bacillus%%% subtilis as the host. The optimal pH for the mannanase activity of the recombinant enzyme was around pH 10. The enzyme was very resistant to surfactants, for example, SDS up to 2.0% (w/v).

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DIALOG(R)File 5:Biosis Previews(R)

18028442 BIOSIS NO.: 200400399231
Gene cloning and characterization of a %%%Bacillus%%% vietnamensis metalloprotease
AUTHOR: Kim Mihwan; Nishiyama Yoshitaka; Mura Kiyoshi (Reprint); Tokue Chiyoko; Arai Soichi
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ABSTRACT: A %%%Bacillus%%% vietnamensis metalloprotease (BVMP) with high affinity toward %%%collagen%%% was isolated and purified from the %%%culture%%% supernatant of %%%Bacillus%%% vietnamensis 11-4 occurring in Vietnamese fish sauces. The BVMP gene was cloned and its nucleotide and coded amino acid sequences determined. BVMP consists of 547 amino acid residues, with the zinc-binding sites conserved in common metalloproteases. It shares 57% amino acid identity with thermolysin originating from %%%Bacillus%%% thermoproteolyticus. The three-dimensional structure of BVMP was deduced by computer-aided modeling with the use of the known three-dimensional thermolysin structure as a template. Like thermolysin, BVMP cleaved the oxidized insulin B-chain at the peptide bonds involving the N-terminal sides of hydrophobic and aromatic amino acids. BVMP also showed high hydrolytic activity toward gelatin, %%%collagen%%%, casein, and elastin, especially toward the skeletal proteins at increased NaCl concentration. The high activity was found to be due to enhanced affinity to the substrates. Kinetical data on BVMP indicated that the Km values for the hydrolysis of Cbz-GPGGPA as a %%%collagen%%% model decreased as the concentration of added NaCl increased. Some contribution of this enzyme during the aging of fish sauces at high salt concentrations can thus be expected.

8/7/4
DIALOG(R)File 5:Biosis Previews(R)

17392060 BIOSIS NO.: 200300350779
In vitro-generated respiratory mucosa: A new tool to study inhalational anthrax.
AUTHOR: Radyuk Svetlana N (Reprint); Mericko Patricia A; Popova Taissia G; Grene Edith; Alibek Ken
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ABSTRACT: We generated a three-dimensional (3-D) model of human airway tissues in order to study initiation of inhalational form of anthrax infection. The system was designed to model the air-blood barrier of the respiratory tract represented by epithelial cells and macrophages. When grown on %%%collagen%%%/fibronectin gel support at an air-liquid interface, airway epithelial cells formed cell layers morphologically resembling those in vivo. These preformed epithelial cell cultures were further supplemented with monocytes/macrophages isolated from human blood. After 2-5 days of co-%%%culture%%%, monocytes differentiated into a phenotype of resident macrophages, which was evaluated by the expression of specific cell surface markers. This model allowed sorting out the role of each type of cell found at the air surface of the lung. The interdependence of macrophages and epithelial cells in the clearance of anthrax spores from airways and the capacity of the airway epithelial cells to protect from anthrax infection was demonstrated.

8/7/5

16765485 BIOSIS NO.: 200200358996
Isolation and characteristics of %%%Bacillus%%% subtilis CN2 and its collagenase production
AUTHOR: Tran L H; Nagano H (Reprint)
AUTHOR ADDRESS: Dept. of Home Economics, Faculty of Education, Gifu University, Gifu, 501-11, Japan**Japan
JOURNAL: Journal of Food Science 67 (3): p1184-1187 April, 2002 2002
MEDIUM: print
ISSN: 0022-1147
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RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: An isolated bacterium strain named CN2 found in Vietnamese fish sauce has been identified as %%%Bacillus%%% subtilis. In an enzyme-producing medium with 0% and 8% NaCl concentration, the CN2 strain produced the maximum collagenase activity, 3.07 U/ml and 2.60 U/ml. The strain also produced gelatinase, but the maximum activity was only 1.03 U/ml at 8 h of incubation time and prolonged more than 22 h. %%%Bacillus%%% subtilis CN2, grown slowly in a medium containing 12% NaCl, showed a decreased rate of collagenase activity with a maximum activity of 1.60 U/ml at 18 h of incubation time. The %%%culture%%% supernatant of CN2 strain digested a purified native %%%collagen%%% from rat tail tendon as well as alphas-casein at Met123-Lys 124 position. The %%%culture%%% supernatant of CN2 can be used to produce healthy foods.

8/7/6

15737281 BIOSIS NO.: 200000455594

Evidence for contribution of tripartite hemolysin BL, phosphatidylcholine-preferring phospholipase C, and collagenase to virulence of %%%Bacillus%%% cereus endophthalmitis
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AUTHOR ADDRESS: Hazardous Materials Response Unit, FBI Academy, Building 12, Quantico, VA, 22135, USA**USA
JOURNAL: Infection and Immunity 68 (9): p5269-5276 September, 2000 2000
MEDIUM: print
ISSN: 0019-9567
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: %%%Bacillus%%% cereus causes a highly fulminant endophthalmitis which usually results in blindness. We previously concluded that hemolysin BL (HBL), a tripartite necrotizing pore-forming toxin, is a probable endophthalmitis virulence factor because it is highly toxic to retinal tissue in vitro and in vivo. We also determined that B. cereus produces additional retinal toxins that might contribute to virulence. Here we fractionated crude B. cereus %%%culture%%% supernatant by anion-exchange chromatography and found that in vitro retinal toxicity was also associated with phosphatidylcholine-preferring phospholipase C (PC-PLC). The pure enzyme also caused retinal necrosis in vivo. We showed that phosphatidylinositol-specific PLC and sphingomyelinase were nontoxic and that two hemolysins, cereolysin O and a novel hemolysin designated hemolysin IV, were marginally toxic in vitro. The histopathology of experimental septic endophthalmitis in rabbits mimicked the pathology produced by pure HBL, and both HBL and PC-PLC were detected at toxic concentrations in infected vitreous fluid. Bacterial cells were first seen associated with the posterior margin of the lens and eventually were located throughout the lens cortex. Detection of collagenase in the vitreous humor suggested that infiltration was facilitated by the breakdown of the protective %%%collagen%%% lens capsule by that enzyme. This work supports our conclusion that HBL contributes to B. cereus virulence and implicates PC-PLC and collagenase as additional virulence factors.

8/7/7
DIALOG(R)File 5:Biosis Previews(R)

15690136 BIOSIS NO.: 200000408449
Thermostable collagenolytic activity of a novel thermophilic isolate, %%%Bacillus%%% sp. strain NTAP-1
AUTHOR: Nakayama Toru; Tsuruoka Naoki; Akai Minoru; Nishino Tokuzo (Reprint)
AUTHOR ADDRESS: Department of Biomolecular Engineering, Graduate School of Engineering, Tohoku University, 07 Aoba-yama, Sendai, 980-8579, Japan** Japan
JOURNAL: Journal of Bioscience and Bioengineering 89 (6): p612-614 June, 2000 2000
MEDIUM: print
ISSN: 1389-1723
DOCUMENT TYPE: Article
RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: We isolated an acidophilic thermophile belonging to the genus %%%Bacillus%%%, strain NTAP-1, which secreted a thermostable collagenolytic activity into the %%%culture%%% medium. The collagenolytic activity exhibited an optimum pH for Azocoll hydrolysis of pH 3.9 and was not completely inhibited by 10 mM ethylenediaminetetraacetic acid (residual activity, 63%), suggesting that %%%Bacillus%%% NTAP-1 produces a novel acid proteinase with highest activity for %%%collagen%%%. The collagenolytic activity was thermostable; more than 80% of the original activity was retained after incubation of the %%%culture%%% supernatant at pH 4.0 and 60degreeC for 4 h.

8/7/8
DIALOG(R)File 5:Biosis Previews(R)

14686021 BIOSIS NO.: 199800480268
Surface structure, hydrophobicity, phagocytosis, and adherence to matrix proteins of %%%Bacillus%%% cereus cells with and without the crystalline surface protein layer
AUTHOR: Kotiranta Anja (Reprint); Haapsalo Markus; Kari Kirsti; Kerosuo Eero; Olsen Ingar; Sorsa Timo; Meurman Jukka H; Lounatmaa Kari
AUTHOR ADDRESS: Inst. Dent., P.B. 41, Univ. Helsinki, FIN 00014 Univ. Helsinki, Helsinki, Finland**Finland
JOURNAL: Infection and Immunity 66 (10): p4895-4902 Oct., 1998 1998
MEDIUM: print
ISSN: 0019-9567
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Nonopsonic phagocytosis of %%%Bacillus%%% cereus by human polymorphonuclear leukocytes (PMNs) with particular attention to bacterial surface properties and structure was studied. Two reference strains (ATCC 14579T and ATCC 4342) and two clinical isolates (OH599 and OH600) from periodontal and endodontic infections were assessed for adherence to matrix proteins, such as type I %%%collagen%%%, fibronectin, laminin, and fibrinogen. One-day-old cultures of strains OH599 and OH600 were readily ingested by PMNs in the absence of opsonins, while cells from 6-day-old cultures were resistant. Both young and old cultures of the reference strains of B. cereus were resistant to PMN ingestion. Preincubation of PMNs with the phagocytosis-resistant strains of B. cereus did not affect the phagocytosis of the sensitive strain. Negatively stained cells of OH599 and OH600 studied by electron microscopy had a crystalline protein layer on the cell surface. In thin-sectioned cells of older cultures (3 to 6 days old), the S-layer was observed to peel off from the cells. No S-layer was detected on the reference strains. Extraction of cells with detergent followed by sodium dodecyl sulfate-polyacrylamide gel electrophoresis revealed a major 97-kDa protein from the strains OH599 and OH600 but only a weak 97-kDa band from the reference strain ATCC 4342. One-day-old cultures of the clinical strains (hydrophobicity, 5.9 to 6.0%) showed strong binding to type I %%%collagen%%%, laminin, and fibronectin. In contrast, reference strains (hydrophobicity, -1.0 to 4.2%) as well as 6-day-old cultures of clinical strains (hydrophobicity, 19.0 to 53.0%) bound in only low

numbers to the proteins. Gold-labelled biotinylated fibronectin was localized on the S-layer on the cell surface as well as on fragments of S-layer peeling off the cells of a 6-day-old %%%culture%%% of B. cereus OH599. Lactose, fibronectin, laminin, and antibodies against the S-protein reduced binding to laminin but not to fibronectin. Heating the cells at 84degree C totally abolished binding to both proteins. Benzamidine, a noncompetitive serine protease inhibitor, strongly inhibited binding to fibronectin whereas binding to fibronectin whereas binding to laminin was increased. Overall, the results indicate that changes in the surface structure, evidently involving the S-layer, during growth of the clinical strains of B. cereus cause a shift from susceptibility to PMN ingestion and strong binding to matrix and basement membrane proteins. Furthermore, it seems that binding to laminin is mediated by the S-protein while binding to fibronectin is dependent on active protease evidently attached to the S-layer.

8/7/9
DIALOG(R)File 5:Biosis Previews(R)

14244110 BIOSIS NO.: 199800038357
Bacterial phospholipase C upregulates matrix metalloproteinase expression by cultured epithelial cells
AUTHOR: Firth J D; Putnins E E; Larjava H; Uitto V-J (Reprint)
AUTHOR ADDRESS: Fac. Dent., Univ. B.C., 2199 Wesbrook Mall, Vancouver, BC V6T 1Z3, Canada**Canada
JOURNAL: Infection and Immunity 65 (12): p4931-4936 Dec., 1997 1997
MEDIUM: print
ISSN: 0019-9567
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Phospholipase C (PLC) is a putative virulence factor of several pathogenic bacteria. We studied if exogenous PLC would perturb epithelial behavior in infected tissues. Gelatin and casein zymography of cell %%%culture%%% medium indicated that the broad-spectrum PLC of %%%Bacillus%%% cereus induced matrix metalloproteinase (MMP) production in epithelial cells of human skin (NHEK), human gingiva (HGE), and porcine periodontal ligament (PLE). In all three cell types, the strongest increase (ninefold) at 0.1 U/ml was seen in the MMP-9 (92-kDa gelatinase) activity, and the effect was dose dependent in the range of 0.1 to 1.0 U/ml. A relatively weaker increase (twofold) in MMP-2 (72-kDa gelatinase) was also observed in each cell type. PLC induction of MMP-3 (48-kDa stromelysin) was also seen in NHEK and HGE on gelatin and more sensitively for PLE by casein zymography (fivefold). Total gelatinolytic activity as measured by degradation of 14C-labeled denatured type I %%%collagen%%% increased by about 18-fold (NHEK), 12-fold (HGE), and 14-fold (PLE). Northern analysis showed a clear increase in the MMP-9, and a minor increase in MMP-3 mRNA levels but no significant increase in MMP-2 mRNA levels. Further studies with PLE revealed that MMP-9 induction by PLC progressively increased with the length of cell %%%culture%%% time in the absence of serum. PLC induction of MMPs was polar, with MMP-9 and MMP-3 secreted primarily in the apical direction and MMP-2 secreted mainly in the basal direction. The PLC effect was blocked by neomycin, an inhibitor of the phosphoinositol signal pathway. No significant effects

were observed in MMP expression with the calcium ionophore A23187 or phospholipase A2. Morphologically, PLC treatment resulted in reduced contacts between the cultured cells and loss of the cell surface microvilli. These results suggest that PLC secreted by bacterial pathogens may disrupt epithelium of infected tissue and increase the subepithelial tissue destruction through induction of MMPs.

8/7/10
DIALOG(R)File 5:Biosis Previews(R)

13730005 BIOSIS NO.: 199799364065
Expression of the colH gene encoding Clostridium histolyticum collagenase in %%%Bacillus%%% subtilis and its application to enzyme purification
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JOURNAL: Microbiology and Immunology 40 (12): p923-929 1996 1996
ISSN: 0385-5600
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: The colH gene encoding 116-kDa collagenase of Clostridium histolyticum (cColH) was cloned into an Escherichia coli-%%%Bacillus%%% subtilis shuttle vector to develop a method for purification of recombinant collagenase (rColH). When plasmid pJCM310 containing the colH gene was introduced into B. subtilis DB104 and the transformant was grown in LB broth at 37 C, stability of the plasmid was not maintained. However, stability was partly improved by growing the transformant in a modified LB broth containing 0.5 m sodium succinate with gentle shaking at 35 C. When the transformant was grown to an optical density of 0.4 at 600 nm in this medium, pJCM310 was stable and rColH was produced in sufficient amounts. rColH was purified to homogeneity by ammonium sulfate precipitation, gel filtration and ion-exchange chromatography. The yield of rColH from an 800-ml %%%culture%%% was 0.53 mg and its specific activity was estimated to be 1,210 U per mg of protein. The purified rColH was capable of degrading native type-I %%%collagen%%% fibril from bovine achilles tendon, as was demonstrated by zymography. A comparison of the N-terminal amino acid sequence between cColH and rColH revealed that rColH has 10 extra N-terminal amino acid residues. However, the peptide mapping of rColH with V8 protease was virtually identical to that of cColH. Furthermore, the molecular mass of rColH was estimated to be 112,999 Da by mass spectrometry, coinciding with the value of 112,977 Da, which was predicted from the nucleotide sequence of the colH gene. Therefore, the recombinant B. subtilis %%%culture%%% is capable of serving as a useful source for enzyme purification.

8/7/11
DIALOG(R)File 5:Biosis Previews(R)

12859458 BIOSIS NO.: 199598327291
Isolation and characterization of Pz-peptidase from %%%Bacillus%%%

licheniformis N22
AUTHOR: Asdornnithee Somsit; Himeji Eiichi; Akiyama Kouichi; Sasaki Takeshi ; Takata Renkichi (Reprint)
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JOURNAL: Journal of Fermentation and Bioengineering 79 (3): p200-204 1995 1995
ISSN: 0922-338X
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Pz-peptidase is an endopeptidase that cleaves the synthetic substrate, 4-phenylazobenzyloxycarbonyl-Pro-Leu-Gly-Pro-Arg (Pz-peptide), which was originally developed for the assay of Clostridium histolyticum collagenase (Wunsch and Heidrich, Hoppe-Seyler's Z. Physiol. Chem., 333, 149-151, 1963; Morales and Woessner, J. Biol. Chem., 252, 4855-4860, 1977). Pz-peptidase was purified from the %%%culture%%% filtrate of %%%Bacillus%%% licheniformis N22. The purified Pz-peptidase showed a molecular weight of 70,000 in SDS-polyacrylamide gel electrophoresis and 150,000 in gel filtration. Optimal pH for cleavage of Pz-peptide was 7.8. The Pz-peptidase activity was strongly inhibited by metal chelators such as EDTA and O-phenanthroline. Substrate specificity studies indicated that Pz-peptidase cleaved oligopeptides at the Xaa-Gly site in Xaa-Gly-Pro. However, Pz-peptidase failed to hydrolyze native %%%collagen%%%, denatured %%%collagen%%%, hemoglobin and casein.

8/7/12
DIALOG(R)File 5:Biosis Previews(R)

12768984 BIOSIS NO.: 199598236817
Interaction between fibronectin-bearing surfaces and %%%Bacillus%%% Calmette-Guerin (BCG) or gelatin microparticles
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JOURNAL: Journal of Pharmacy and Pharmacology 47 (3): p177-181 1995 1995
ISSN: 0022-3573
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Gelatin, prepared commercially by degradation of animal %%%collagen%%%, was studied to see whether it had an affinity for fibronectin, which has a known affinity for %%%collagen%%%, and whether gelatin-based drugs could be used to target fibronectin-excreting tumours. %%%Bacillus%%% Calmette-Guerin (BCG) vaccine, an attenuated strain of Mycobacterium bovis, is currently the most effective treatment for superficial transitional cell carcinoma of the bladder. The living cells of the BCG vaccine associate with the fibronectin-bearing surfaces of the tumour. Using a multi-well %%%culture%%% plate technique, gelatin microparticles were shown to be adsorbed onto murine S180 sarcoma cells and this reaction was substantially inhibited by the addition of human plasma fibronectin. The avidities of various BCG substrains and gelatin

microparticles for glass-bound fibronectin were measured and the association constants determined. The gelatin microparticles associated with the fibronectin with equal avidity as the BCG cells. The results suggest that this model system may allow the investigation of gelatin-based drug delivery devices capable of targeting fibronectin-bearing surfaces associated with some tumours.

8/7/13
DIALOG(R)File 5:Biosis Previews(R)

12578637 BIOSIS NO.: 199598046470
A device to measure the oxygen uptake rate of attached cells: Importance in bioartificial organ design
AUTHOR: Foy Brent D; Rotem Avi; Toner Mehmet; Tompkins Ronald G; Yarmush Martin L (Reprint)
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JOURNAL: Cell Transplantation 3 (6): p515-527 1994 1994
ISSN: 0963-6897
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Quantification of the dependence of cellular oxygen uptake rate (OUR) on oxygen partial pressure is useful for the design and testing of bioartificial devices which utilize cells. Thus far, this information has only been obtained from suspended cells and from cells attached to microcarriers. In this work, a device was developed to obtain the dependence of OUR on oxygen partial pressure for anchorage-dependent cells cultured in standard %%%culture%%% dishes. The device is placed and sealed on the top of the %%%culture%%% dish, and holds a Clark polarographic mini-electrode flush with the bottom surface of the device. It also houses a motor to spin a magnetic stir bar within the cell chamber to insure that the medium is well-mixed. Several characteristics of the device - such as oxygen leakage into the device chamber, electrode-lag time, and linearity of the electrode at low oxygen partial pressures - were quantified and their potential effect on the values of V-m (maximal OUR) and K-0.5 (oxygen partial pressure at which OUR is half-maximal) were evaluated. Comparison of V-m and K-0.5 values obtained with this device with previously published values for suspended rat hepatocytes, %%%Bacillus%%% cereus, and E. coli indicated that the technique provides values accurate within 30% as long as the cell under study has a K-0.5 greater than approximately 1.0 mmHg. For hepatocytes cultured on 0.05 mm thickness %%%collagen%%% gel for 1 day (n = 4) and 3 days (n = 6), V-m was found to be 0.38 +- 0.12 and 0.25 +- 0.09 nmol O-2/s/10-6 cells, respectively, and K-0.5 was found to be 5.6 +- 0.5 and 3.3 +- 0.6 mmHg, respectively. This technique should aid in predicting bioreactor conditions such as flow rate, cell density, distance of cell from flow, and gas phase oxygen partial pressure which can lead to oxygen limitations. In addition, further studies of the effect of factors such as extracellular matrix composition, metabolic substrate, and drugs on the dependence of OUR on oxygen partial pressure for many anchorage-dependent cell types can be pursued with this technique.

8/7/14
DIALOG(R)File 5:Biosis Previews(R)

12069585 BIOSIS NO.: 199497090870
Mycobacterium leprae: Behaviour in fat cells undergoing adipose differentiation in vitro
AUTHOR: Godard Chantal-Marie
AUTHOR ADDRESS: INSERM U.322, Retrovirus maladies assoc., Campus de Luminy, 7 route Leon-Lachamp, BP 33, 13273 Marseille Cedex 9, France**France
JOURNAL: Comptes Rendus de l'Academie des Sciences Serie III Sciences de la Vie 316 (11): p1355-1362 1993 1993
ISSN: 0764-4469
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: We have investigated the behaviour of M. leprae in murine preadipocyte cells (clone Ob17) undergoing the adipose cell conversion process in vitro. Actively differentiating Ob17 cells were infected with M. leprae. The morphological index (MI) of the acid-fast bacteria (AFB) present at day 12 and day 25 after infection was compared to the MI of the AFB inoculated. An increase of the MI was consistently observed. This increase is suppressed by rifampicin. Due to important cell loss, an increase of the number of the AFB per %%%culture%%% could not be obtained in monolayer tissue cultures. In order to prevent cell loss, we used a three-dimensional %%%culture%%% system. This cell %%%culture%%% system is an in vitro reconstitution of the human dermis, a main target organ for the leprosy %%%bacillus%%%. Adipocytes infected with M. leprae are incorporated in a condensed %%%collagen%%% lattice together with skin fibroblasts. Under such conditions, both an increase of the MI and an increase of the number of the AFB are obtained. This suggests that celluLar functions related to the adipose cell differentiation process might complement the defective bacterial genome, leading to transient multiplication in vitro.

8/7/15
DIALOG(R)File 5:Biosis Previews(R)

11235231 BIOSIS NO.: 199293078122
EFFECTS OF GROWTH FACTORS HORMONES BACTERIAL LIPOPOLYSACCHARIDES AND LIPOTEICHOIC ACIDS ON THE CLONAL GROWTH OF NORMAL URETERAL EPITHELIAL CELLS IN SERUM-FREE %%%CULTURE%%%
AUTHOR: WILLE J J (Reprint); PARK J; ELGAVISH A
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JOURNAL: Journal of Cellular Physiology 150 (1): p53-58 1992
ISSN: 0021-9541
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

ABSTRACT: In vitro tissue %%%culture%%% techniques were employed to study the effects of bacterial endotoxins on the growth of normal epithelial cells from the human ureter (NHU). Primary cultures of NHU cells were

initiated from explant outgrowth cultures of human ureteral tissue and cultured on %%%collagen%%% gel in F-12* medium containing 1% fetal calf serum (FCS). Optimal clonal growth of secondary cultures of NHU cells seeded at relatively low seeding cell densities, directly on plastic dishes, was achieved in F-12* medium containing bovine pituitary extract (0.5% BPE) and 0.05% BSA. Results indicated that insulin in the F-12* medium could be replaced by three orders of magnitude less IGF-1. Further clonal growth experiments demonstrated that PGE1 is growth stimulatory and can replace BPE as a growth factor requirement. This finding was in agreement with the fact that BPE growth requirement could be replaced by cholera toxin or dibutyryl cAMP. These results suggested that both BPE and cholera toxin operated by activation of a cAMP-dependent mitogenic pathway. Seven gram-negative bacterial lipopolysaccharides (LPS) and three gram-positive bacterial lipotechoic acids (LT) were tested for their effects on NHU clonal growth. Three out of the five LPS derived from Escherichia coli (strains 055:B5, 0128:B12, and 0127:B8), LPS from Klebsiella pneumoniae, and LPS from Pseudomonas aeruginosa all showed significant growth inhibitory effects at minimally effective doses ranging from 5 to 25 .mu.g/ml. LPS derived from E. coli strain (0111:B4) had no growth effects at the highest concentration tested (100 .mu.g/ml). In contrast, LT derived from Streptococcus pyogenes, S. faecalis, Staphylococcus aureus, and %%%Bacillus%%% subtilis all markedly enhanced clonal growth at concentrations ranging from 1 .mu.g/ml < [LT] < 50 .mu.g/ml. LT from Strep. pyogenes was inhibitory to clonal growth at 100 .mu.g/ml. The growth inhibitory effects of LPS were shown to be sensitive to the presence of hydrocortisone in the growth medium, indicating that LPS effects on growth are mediated via the arachidonic acid cascade. We speculate that these results indicate a link between the susceptibility of uroepithelial tissue to the pathogenic microflora seen in urinary tract diseases and the differential sensitivity of proliferation-competent uroepithelial cells to growth inhibition by LPS produced by gram-negative bacteria. However, further studies with uropathogenic serotypes will be necessary to corroborate this possibility. The growth-stimulating activity of LTs produced by gram-positive bacteria may be due to their ability to bind to cell-associated fibronectin and to activate the fibronectin receptor as part of ligand receptor-induced mitogenic transmembrane signalling pathway.

09781827 BIOSIS NO.: 198988096942
DISPASE A NEUTRAL PROTEASE FROM %%%BACILLUS%%%-POLYMYXA IS A POWERFUL FIBRONECTINASE AND TYPE IV COLLAGENASE
AUTHOR: STENN K S (Reprint); LINK R; MOELLMANN G; MADRI J; KUKLINSKA E
AUTHOR ADDRESS: DEP DERMATOL, YALE UNIV SCH MED, 333 CEDAR ST, NEW HAVEN, CONN 06510, USA**USA
JOURNAL: Journal of Investigative Dermatology 93 (2): p287-290 1989
ISSN: 0022-202X
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

ABSTRACT: Dispase, a neutral protease isolated from %%%culture%%% filtrates

of %%%Bacillus%%% polymyxa, has proven to be a rapid, effective, but gentle agent for separating intact epidermis from the dermis and intact epithelial sheets in %%%culture%%% from the substratum. In both cases it effects separation by cleaving the basement membrane zone region while preserving the viability of the epithelial cells. Because it is not known what or where in the basement membrane zone Dispase cleaves, we set up studies to define its substrate specificity. Using purified basement membrane components and sodium dodecyl sulfate-polyacrylamide gel electrophoresis we show that Dispase cleaves fibronectin and type IV %%%collagen%%%, but not laminin, type V %%%collagen%%%, serum albumin, or transferrin. The action of Dispase on %%%collagen%%% appears to be selective for type IV %%%collagen%%% in that several stable degradation products are formed, whereas the enzyme degrades type I %%%collagen%%% only minimally. In newborn human skin, as seen by electron microscopy, Dispase removes the lamina densa, rich in type IV %%%collagen%%%, but preserves the anchoring fibrils (structures known to contain type VII %%%collagen%%%) and the epidermal cells. Because its action is so selective, it suggests that Dispase can serve as a powerful tool for dissecting epithelial-mesenchymal interactions.

8/7/17
DIALOG(R)File 5:Biosis Previews(R)

09715547 BIOSIS NO.: 198988030662
DETECTION AND CHARACTERIZATION OF THE COLLAGENOLYTIC ACTIVITY OF SUBTILISIN-TYPE SERINE PROTEINASES
AUTHOR: KULAEV I S (Reprint); SOLOV'EVA N I; KALEBINA T S; PUDENSKAYA G N; NURMINSKAYA M V
AUTHOR ADDRESS: MV LOMONOSOV MOSC STATE UNIV, MOSCOW, USSR**USSR
JOURNAL: Doklady Akademii Nauk SSSR 303 (2): p499-502 1988
ISSN: 0002-3264
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: RUSSIAN

ABSTRACT: Callagenolytic activity was detected and studied comparatively in the following proteolytic enzymes: subtilisin 72 produced by %%%Bacillus%%% subtilis, thiol-dependent serine protein from Thermoactinomyces vulgaris, and serine proteinase from the %%%culture%%% fluid of %%%Bacillus%%% sp. C-14-acetylated %%%collagen%%% from rat skin was used as substrate. The products of enzymatic hydrolysis were analyzed, using electrohporesis. It was shown that the enzymes possessed collagenolytic activity. Differences were revealed between these enzymes and the trypsin type enzymes with respect to the mechanism of their hydrolysis.

8/7/18
DIALOG(R)File 5:Biosis Previews(R)

06595772 BIOSIS NO.: 198274012195
STUDIES ON ASPIRIN DERIVATIVES WITH VERY LITTLE SIDE EFFECT 2. POTENT PLATELET ANTI AGGREGANT ACTIVITY AND NO MUTAGENICITY OF ASPIRIN ISO PROPYL ANTIPYRINE

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JOURNAL: Journal of Pharmacobio-Dynamics 4 (10): p803-811 1981
ISSN: 0386-846X
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

ABSTRACT: The effect of a new aspirin derivative, aspirin-isopropylantipyrine (AIA), with very little gastric ulcerogenic activity and very slight acute toxicity and with analgesic, antipyretic anti-inflammatory and platelet aggregation inhibitory activities was evaluated in vitro and ex vivo and compared with those of aspirin and isopropylantipyrine (IA). In vitro, AIA, aspirin and IA (50-200 .mu.M) caused concentration-dependent inhibition of %%%collagen%%%-induced aggregation in rabbit platelets, although AIA was several-fold more active than the others. Arachidonic acid-induced aggregation was inhibited by all 3 agents (200 .mu.M) in the following magnitude; IA > aspirin > AIA. The 3 agents did not influence primary ADP-induced aggregation. The in vitro effects on the release-inducing aggregants were confirmed by ex vivo experiments in rats. AIA and aspirin (50 mg/kg) exhibited almost identical inhibitory potencies in the extent and the rate of %%%collagen%%%-induced aggregation 4 h after s.c. injection. AIA was still effective 24 h after administration as well as aspirin. IA was less effective, differing from the results in vitro. AIA had no effect on plasmin activity and blood flow through the common carotid artery. AIA (1 mM) maintained spreading and beating of myocardial cells in a serum-free %%%culture%%%. As special toxicity trials on AIA mutagenicity, tests were made by the Rec-assay with %%%Bacillus%%% subtilis, by the plate %%%culture%%% with Escherichia coli and by the Ames system with Salmonella typhimurium. AIA had no mutagenic effect under any of those methods and no effect on the mutagenic action of 3,4-benzopyrene under the liver microsome test using the Ames system.

8/7/19
DIALOG(R)File 5:Biosis Previews(R)

05437312 BIOSIS NO.: 197866023796
SOME ASPECTS OF SPECIFIC PROTEINASES OF MESOPHILIC AND THERMOPHILIC BACTERIA
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JOURNAL: Mikrobiolohichnyi Zhurnal (Kiev) 39 (4): p444-451 1977
ISSN: 0026-3664
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: UKRAINIAN

ABSTRACT: Proteinase preparations hydrolyzing insoluble fibrillar proteins (elastin and %%%collagen%%%), parallel with globular ones, are isolated from %%%culture%%% liquid of mesophilic %%%Bacillus%%% subtilis and Pseudomonas aeruginosa, thermophilic B. subtilis thermophilus and B. circulans thermophilus. The temperature optimum and thermostability of caseinolytic and elastolytic proteinases of thermophils is considerably

higher than in mesophils. An effective method is developed for fractionating proteinases of B. subtilis with a maintained high activity in the elastolytic and collagenolytic components of the complex. Cation exchange resin KB- 51 .times. 2 ion-exchange chromatography was promising for concentration and preservation of all complexes of the B. subtilis proteinases. The presence of at least 4 isoelastases, 3 proteinases hydrolyzing casein and %%%collagen%%% and 2 hemoglobinolytic enzymes is established by CM-cellulose ion-exchange chromatography. Gel filtration on Sephadex G-75 showed a complex nature of elastolytic component of the B. subtilis proteinases, its low-MW part was essential for the activity.

8/7/20
DIALOG(R)File 5:Biosis Previews(R)

0001705040 BIOSIS NO.: 19664700109142
Degradation of insoluble %%%collagen%%% by aerobic bacteria. I Isolation of the protease-pro-ducing bacteria and their bacteriological characters
AUTHOR: FURUKAWA YUJI; FUJII YOSHITSUGU; UEMURA TEIJIRO
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JOURNAL: NIPPON NOGEI KAGAKU KAISHI [J AGR CHEM SOC JAP] 40 ((6)): p 252-256 1966 1966
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ABSTRACT: Thirty-two strains of aerobic bacteria, isolated from eighty-seven soil samples, were tested for the protease-producing abilities. It was found that considerable differences existed in their capacities in producing D-collagenase, gelatinase and caseinase. Among three strains, which showed higher D-collagenase activity, strain Kp-931 was the strongest D-collagenase producer and thus selected as the test organism. The crude protease preparation obtained from the %%%culture%%% filtrate of this organism had pH optima at 8.0 to 10.0 with hide powder, at 9.0 with gelatin and at 8.0 with casein substrates. From further experiments on the protease produced into the medium at different phases of cell growth, it was observed that the maximum D-collagenase activity was found at the later stage of logarithmic growth phase while the maximum gelatinase activity was reached at the stationary phase. These results suggest that a specific enzyme which digests hide powder is produced by this aerobic organism. The strain Kp-931 was identified as %%%Bacillus%%% cereus from morphological and physiological studies.
ABSTRACT AUTHORS: Authors
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Characterization of a keratinolytic protease from a strain of %%%Bacillus%%% licheniformis
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JOURNAL: Journal of Cellular Biochemistry Supplement 0 (18D): p170 1994
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